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ABSTRACT

The report describes the accomplishments of a swimming project to teach instructional objectives to deaf blind, severely-to-profoundly retarded students, using nonhandicapped high school and college students who were trained and paid as peer tutors. Tutors recieved hands-on as well as didactic training and were evaluated by means of pretests and performance assessments. Initial pre-testing on gross motor, communication, and social skills was followed by development of short term objectives and individualized education programs. (Objectives are appended). Examples of child gains are cited, and it is suggested that the gains made by project Ss were the result of project activities. Further evaluative data include teachers' observations and an analysis of the percent of objectives achieved compared to the percent of objectives written for each child. The peer tutor component revealed positive changes in attitudes and awareness. The report concludes that the combined recreational and educational model can help facilitate the integration of handicapped and nonhandicapped students. Extensive appendixes include project forms, corresponence and a final summary report from an external evaluator. (CL)

University of Washington

College of Education

and

Experimental Education Unit

INTEGRATED EDUCATIONAL/LEISURE TIME MODEL FOR DEAF-BLIND CHILDREN AND YOUTH

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FINAL REPORT

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INTEGRATED EDUCATIONAL/LEISURE TIME MODEL FOR DEAF-BLIND CHILDREN AND YOUTH

FINAL REPORT

Table of Contents

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FINAL REPORT: INTEGRATED EDUCATIONAL/LEISURE TIME MODEL FOR DEAF-BLIND CHILDREN AND YOUTH

Summary Statement - Total Project

The project described in this report focused on teaching instructional objectives to deaf-blind children who are also severely-to-profoundly mentally retarded. The project, developed under a contract from the U.S. Department of Education, Special Education Programs, was initiated by an interdisciplinary group at the University of Washington and managed cooperatively by the University and Fircrest School, an intermediate care facility for the mentally retarded.

The learning environment selected for the children was a community swimming pool located at Fircrest. There were several reasons for this choice. First, the program's goal was to increase the deaf-blind children's opportunities for interaction with non-handicapped people, and for this population a recreational setting is a more suitable place for integration than the classroom. Second, a warm-water pool provides a buoyant, comfortable environment for children who are sensorily impaired and in many cases motorically involved as well. The warmth of the water reduces muscle spasms and pain, and the buoyancy can aid the child with cerebral palsy in learning to sit, stand, and walk, a task he or she can accomplish more easily in water than on land. It was therefore reasoned that this environment might facilitate the children's learning of additional skills which they could then generalize to other settings. The project staff believed that through the acquisition of new skills, the children would be able to function more independently, and this would enable them to participate more easily in integrated community settings and to be more readily accepted by the community.

The instructors of the deaf-blind children were nonhandicapped high school and community college students who were hired to work with the children every day after school. They were trained to serve as peer tutors to individual children, and this contact provided the project's first approximation to integration of handicapped and nonhandicapped people. It should be noted that the project's interpretation of the term "peer tutor" differs in several ways from the concept current in the literature: a) the tutors worked with the deaf-blind students for 2 hours per day after school rather than during school time; b) they were paid for their work; c) although the tutors' ages overlapped with the ages of most of the children there were vast differences between the groups in developmental level (the functional level of the deaf-blind children ranged from 0 to 24 months in many skill areas); thus d) each tutor's relation to his or her child was more similar to that of a caregiver than of a peer. This relationship provided unusual benefits to the nonhandicapped as well as the handicapped persons.

The contract was awarded in September, 1980, and following pre-testing of the project children and a non-treatment comparison group, direct services began in January, 1981. At that time, and at the beginning of the next 2 academic years, peer tutors were hired and given 35 hours of inservice training, based on topical training modules developed by the project staff. After this the swim program began, operating 2 hours a day, 4 days a week; the project work took place in the Fircrest gymnasium on the fifth day (Friday)

during the first 2 years. In the third year, Friday inservice sessions were conducted by the social work specialist with the emphasis placed upon appropriate use of "free" time, attitudes, and feelings. The focus of the tutors' and students' work in the pool was on individualized instructional objectives devised by the staff, aimed at developing each child's gross motor, communication, and social skills. Data on these objectives were taken daily, and then charted. Staff members monitored child progress each week and adjusted the children's objectives accordingly. At the end of each project year, the children in the program and the non-treatment group were post-tested in the three major skill areas.

Staffing

Most of the project staff functioned in ways readily deducible from their job titles. A few positions, however, need to be explained in greater detail in order to clarify the way the project was structured.

Physical Therapist, Communication Specialist. Because the swim program was designed to provide direct instruction to the children in three areas -- gross motor, communication, and social skills -- it was necessary to include in the staff professionals who were versed in these subjects; they performed initial and final assessments on the children, using standardized measures, and devised objectives for them. These specialists also contributed to the writing of inservice training modules in their areas of expertise, and to presentation of inservice training each fall. Finally, they were present at the pool at least 1 day a week, to take data on children's progress on the objectives they had devised and to modify them as necessary.

Coordinator. This position was in many ways pivotal. The coordinator was responsible for the smooth functioning of the program at many levels, serving as traffic manager, message center, and troubleshooter. She provided liaison with the staff of the institution, which was especially critical in the initial phase of the project. She was there to mediate disputes, answer questions, and act as a clearly identified representative of the project. She was also a central focus to the daily functioning of the swim program. Having assisted in presenting the project and its goals to the peer tutors during their initial inservice training, she was their primary monitor on a daily basis. She provided coherence for the program and set its tone, and in this way was extremely important for the tutors' work and morale. Setting the tone meant everything from ensuring that safety standards were upheld to clearly articulating expectations about tutor performance, to all the intangibles of interpersonal relationships that cannot be prescribed so much as established by example. Her mode of interacting with the institution staff as well as with the handicapped children served as an important model for peer tutors.

Social worker. This person was involved in the development of measures to assess attitude change, to evaluate the tutor's interactions with their children, and many other measures, and she participated in inservice training of the hall staff. In terms of the swim program itself, her most important function was to conduct a number of inservice training sessions for the peer tutors over the course of the year, which provided additional information about handicapping conditions, sensitized the tutors to many issues, and gave them a chance to examine their own feelings about their experiences on the

job. In addition to helping to prevent burn-out, these meetings contributed to the cohesion of the group and made the tutors more sophisticated and reflective about the children they were working with daily.

The Peer Tutor Program

The quality of the peer tutors' work was critical to the success of the swim program. It was therefore necessary to develop hiring procedures which would be finely tuned for selecting the right type of candidate, and then to provide inservice training for peer tutors who differed greatly in the amount and kind of experience they brought to the job.

Hiring. We developed the following five-step procedure for hiring tutors:

First, the vocational counselors at three local high schools were contacted, and the job responsibilities and terms of employment were thoroughly described to them. The counselors announced the job opening and initially screened the students who responded, based on their knowledge of the potential applicants.

Second, the counselors referred the students who had passed the screening to the assistant director of educational programs at Fircrest who was responsible for hiring the tutors. Appointments were made for the students to fill out application forms at Fircrest and to take a tour of the institution, including observations in the classrooms, living units, and pool facilities. For many applicants, this first exposure to a severely/profoundly handicapped group of children was disturbing; many students withdrew their applications after the tour, so that it served as a second screening device.

Third, an interview was conducted with each applicant by the assistant director of education. The students were asked a set of nine questions, which investigated topics such as their health, school attendance, experience in caregiving, and knowledge about mental retardation, data collection, and sign language. Their job responsibilities were reviewed in greater detail at this session.

Fourth, all information gathered on each applicant was reviewed by the assistant director of education. This included the high school counselor's recommendations, the applicant's ability to fill out the application form, a personal interview rating, the person's reactions to the tour, and any available information concerning school attendance and work habits. In some cases input from the teacher and staff who met the applicant during the tour was also considered.

Finally, on the basis of the assembled information the tutors were selected by the same person and referred to the project staff for training.

Factors in tutors' success. Our minimum requirements for tutors were: swimming ability and comfort in the water (one year, someone forgot to put this qualification in the list and we hired and then had to unhire a tutor who not only could not swim but who was afraid of the water); a past record of reliability either in school attendance or on a previous job; and common sense. Our most successful tutors shared the qualities of dependability and

commitment. They came to work every day because they knew that if they did not, their student could not participate that day and would not learn, and they realized that steady progress could be ensured only by consistent programming. The ability to generalize principles from initial inservice training to on-the-job situations was also very important to tutor success.

Mature high school seniors and community college students were, as a rule, the most successful tutors--but not always. Our tutors included some very mature high school sophomores and juniors, and one or two relatively immature community college students.

We experimented with different time commitments for tutors. During the first year, when tutors were hired for 5 days a week, we thought we saw some signs of burn-out towards the middle of the year, and we wondered whether the heavy schedule was responsible for that. We decided to try, in the second year, a system of hiring tutors for 2 or 3 days a week, alternating tutors during the week. We were not as pleased with the results and reverted to the 5-day program in the third year. Tutors hired to work with their assigned child every day seem to feel a greater commitment and responsibility to the children and the program. We had fewer absences in the 5-day system than in the alternating 2- and 3-day system.

Inservice training. Tutors were trained more as paraprofessionals than as peer tutors: in addition to receiving hands-on experience in teaching specific skills, they received extensive didactic training in broad principles which they were expected to apply to the work situation. Tutors received approximately 25 hours of training before they met their deaf-blind students. These initial 25 hours covered the definition, etiology, and nature of deaf-blindness; normal and abnormal gross motor development; social development; communication development; lifting, handling, and dressing of motor-impaired or nonambulatory children; safety on land and in water; data collection and behavior management techniques; and attitudinal issues. Ten additional hours of training followed, during which tutors worked with their deaf-blind students in the pool while learning from the professional staff how to teach the children specific skills.

Topical modules for trainers covering all of the above materials were developed and field-tested over the 3 years of the program. The training modules for peer tutors were submitted to LINC and accepted in the autumn of 1982. The initial reviewers for LINC were very laudatory about the modules and felt that they could be used by large numbers of professionals working with profoundly impaired as well as deaf-blind persons. They were described in LINC's Product Alert, but were not picked up either on competitive or non-competitive bids because according to LINC the size of the potential audience was too small, and the current state of the economy was poor. LINC therefore agreed to release the product and forwarded it to an independent publisher, The National Clearinghouse of Rehabilitation Training Materials, in Oklahoma which specializes in information related to low-incidence populations. Correspondence regarding confirmation of this arrangement appears in Appendix H. Feedback from successive groups of peer tutors made possible many refinements in this package from year to year, and several tutors in the final year commented on how much better the training was then than it had been in the previous year.

Persons interested in replicating the project should note that an Operations Manual, containing recommendations for project management, and Supplementary Materials, e.g. handouts and pre-posttests, will also be available through the National Clearinghouse of Rehabilitation Training Materials.

In addition to the initial 35 hours of training, there were training sessions each Friday afternoon after the swimming program was underway. During year 1, these sessions were conducted by members of the project staff; during years 2 and 3, by the social work specialist.

Peer tutor evaluation. Early and frequent evaluation of peer tutors was built into the program. As noted earlier, expectations regarding performance were spelled out to the tutors at the time they were hired, as well as during initial training and throughout the year. A list of ten major peer tutor responsibilities was given to each tutor during initial training, including such responsibilities as always calling in when absent or late, never leaving the child unattended, and the like. Tutors were first evaluated during initial training by means of pre-post tests on their knowledge. Their performance on the job was evaluated within 2 weeks to a month after the beginning of the swim program and then periodically through the year. During the first 2 years of the program, a measure of performance over time was used (Appendix B). Three different staff members observed each tutor and rated his or her performance on each item, on a scale of one to three points, providing a possible score of nine points on each item. This measure was useful for assessing changes in broad areas over 2 or 3 months. Subsequently a second tool was developed (Appendix B) which made it possible to give the tutor feedback on his or her performance on a single day of work. The form was discussed with the tutor in an individual conference at the end of the swim session that was evaluated.

Evaluation early in the year was found to be especially beneficial. Many of the tutors had never worked with handicapped children before, and were therefore unsure of whether they were doing a good job. Early evaluation emphasizing the tutors' strengths, telling them they were doing well, and giving suggestions for changes in one or two areas at times produced dramatic results. The tutors' confidence rose; their rapport with the child and their job skills tended to solidify as the result of the judiciously planned feedback.

Program Management

At the beginning of each project year, the staff met to plan project activities for the year, and an example of a typical schedule follows. In addition, they met with members of the institution's staff to reaffirm the project goals and responsibilities and to maintain open lines of communication.

September

- Pretest deaf-blind children in gross motor, commmunication, and social skills.
- Write individual objectives for each deaf-blind child in each of the instructional areas (gross motor, communication, social).
- Add objectives to the children's school IEPs.
- Hire peer tutors.

October: - Train peer tutors.

October-June:
- Implement daily swimming program, Mondays-Thursdays.
- Collect daily data on individual child objectives.
- Make any changes in children's programs deemed necessary, based on data collected daily.
- Implement Friday sessions in the gymnasium to help children generalize to other settings skills learned in the pool.
- Conduct Friday ongoing training sessions for peer tutors.
- Evaluate peer tutors and hold conferences with them periodically.
- Disseminate information about the project (conferences, presentations to schools, parents, etc).

June: - Posttest deaf-blind children.

Summer: - Manage administrative work, data analysis, writing, dissemination.

Daily Program Schedule

3:10 pm	- Tutors pick children up at their residence halls or at the school bus stop and bring them to the Activities Building.
3:20	- Tutors and children, in locker room, prepare for swimming. Tutors help children into their swim suits, change into their own suits. Tutors and children shower. During locker room and shower time, tutors work with children on individual self-help (e.g., dressing) and other objectives appropriate to this setting.
3:45 - 4:30	- Tutors and children are in the pool, working on individual child objectives.
4:30 - 5:00	- In the locker room tutors help children shower and change into their street clothes. Tutors work with children on self-help objectives. Tutors dry and comb children's hair, clean up the locker room. Tutors shower and change.
5:00	- Tutors accompany children to their residence halls.

The Project's Achievement of Direct Service Objectives

As mentioned in the summary statement, the project children, in addition to being sensorily impaired, were severely to profoundly retarded. This is documented in the results of the initial testing. The nature and level of the objectives written for individual children were, accordingly, geared to the children's special needs. The instructional objectives were primarily aimed at developing gross motor, social, and communication skills. However, for the lower-functioning children, these areas tended to overlap. For example, a child might be asked to maintain a head-up position for a few seconds, as a prerequisite to making social contact; or a tactilely defensive child might need to be trained to hold an object for a few seconds, without dropping it, before working on a more obviously social objective such as holding hands with another child. Only one or two of the 13 children served by the project were likely to be targets for vocational training. For most of the children even a simple self-help skill such as hair-combing was too advanced.

Pre-Testing

The first step in the development of objectives was to pre-test the children in the three skill areas, using standardized measures. The measures used were: for communication skills, the Callier-Azusa and the GATE*; for gross-motor skills, the Bayley Motor Scales, the Callier Azusa, and the Fircrest Deaf-Blind Motor Assessment Tool; and for social skills, the Callier-Azusa. Limitations of the tests for each area will be discussed in turn.

Assessment of communication skills. As noted above, the tests used to assess communication skills were the Callier-Azusa and the Gestural Approach to Thought and Expression (GATE). A discussion of the limitations and appropriateness of the tests with the project population follows.

1. The Callier-Azusa

   a. The Callier-Azusa contains some items which are not appropriate for the deaf-blind population, e.g., Cognition 6-B (recognizes an object as the same whether he sees part or all of it).

   b. The scoring progresses in increments of 1 month or greater, which limits the sensitivity of the instrument for use with a severely/profoundly handicapped population. Developmental gains of less than 1 month are not identifiable with the Callier-Azusa.

   c. Determining an accurate developmental age score from the raw score on the Callier-Azusa is difficult for two reasons: First, there is no established procedure for interpreting the developmental age resulting from the scatter of partially correct items earned above the ceiling item. Second, to determine the developmental score derived from the ceiling item,

* The GATE, modified by project staff and used for communication assessment in this project, is available from Kevin Cole, EEU WJ-10, University of Washington, Seattle, WA 98195.

one matches the ceiling item with the developmental age chart running alongside the score sheet. This method is quite imprecise, and adds to the difficulty of gaining an accurate measure of students' growth.

d. The items included in the evaluation tool are useful in determining long-term objectives for students, and the division of items into the areas of cognition, receptive communication, expressive communication, and speech is helpful in assessing specific needs of the students.

2. The GATE

a. The GATE has more items than the Callier-Azusa for each age level, which provides greater sensitivity in the measurement of communication ability.

b. The GATE does not include the subcategories present in the Callier-Azusa, so less information is gathered regarding specific areas of deficit or strength.

c. Computation of developmental age scores is more precise for the GATE than for the Callier-Azusa.

The primary drawback for both the Callier-Azusa and the GATE for use with a deaf-blind severely/profoundly handicapped population is the lack of sensitivity to small growth gains. The Callier-Azusa measures gains of 1 month or greater, and the GATE measures gains in increments of .33 months.

Changes made by the project staff. Beginning in the second year of the project, a new scoring system was used with the GATE which involves the four categories of "frequency of response," "generalization of response," "degree of self-initiation of response," and "response fluency." Each of the four categories is scored from 0 to 3. This scoring system permits accumulation of a differential score of 0 to 12 for each item of the GATE. This increases the sensitivity of the test to the point where gains of .0275 months may be measurable. Using this multidimensional scoring system, we found test-retest reliability to range from .94 to .98.

Assessment of social skills. The only test found by the project staff which was at all appropriate for measuring social skills in this group was the Callier-Azusa; however, the limitations described above were applicable in the area of social skills as well.

In general, investigation of currently available tools for assessing social skills of low-functioning children revealed that they were too high-level for the project children. The tests measured growth in increments too large for the children to achieve. Further, the tools often measured self-help and vocational skills, identifying these as social skills. Dr. Thompson and Sandra Hannes therefore developed an appropriate tool, which was finished and field-tested on young normal and deaf-blind children during the third project year.

Assessment of gross motor skills. Three tools for assessing gross motor progress were used: The Bayley Motor Scales, the Callier-Azusa Scale (Postural Control and Locomotion Sub-scales), and the Fircrest Deaf-Blind Motor Assessment Tool (Draft 1).

The Bayley Motor Scales are part of the Bayley Scales of Infant Development (Bayley, 1969) which were normed on 1262 infants ranging in age from 2 - 30 months. Among the few standardized motor tests available, the Bayley Motor Scales were appropriate for use with this particular group of deaf-blind children because their gross motor skills fell within the normed age range of 2 - 30 months. Split-half reliability for the Bayley Motor Scales is .84. Tester-observer reliability is 93.4% and test-retest reliability is 75.3% (Bayley, 1969).

The Callier-Azusa Scale consists of five sub-scales, the first of which is Motor Development. This sub-scale is further divided into four areas: Postural Control, Locomotion, Fine Motor, and Visual-Motor. The items in the areas of Postural Control and Locomotion represent gross motor skills; therefore these were the two areas used for pre- and post-testing. There is no reliability information available in the manual describing the Callier-Azusa Scale.

Because both the Bayley Motor and Callier-Azusa Scales are quite widely sliced in their developmental gross motor items, neither was particularly appropriate for use in developing specific gross motor treatment objectives. To fulfill this need, a third gross motor assessment tool was developed by Susan Harris, Ph.D., who was the project physical therapist during the first year. Using the Gross Motor Development and Reflex Assessment Tool developed by Fircrest staff physical therapists as a reference (Baumler et al, 1978), Dr. Harris developed the first draft of the tool which is entitled the Fircrest Deaf-Blind Motor Assessment Tool. This tool is more finely sliced than either the Bayley or Callier-Azusa and thus allows for the development of specific programming objectives. The purpose of the tool is to assess the achievement of functional gross motor developmental skills and automatic reactions among deaf-blind children with developmental ages of birth to 6 years. No reliability data are yet available on this tool.

The Development of Individualized Instructional Objectives

After the initial pre-testing on gross motor, communication, and social skills each year, reports of the assessment results were completed for each target student and distributed to appropriate educational personnel at Fircrest. Long-term objectives were developed and incorporated into each student's IEP.

Short-term objectives were developed on the basis of pre-testing, consultation with the classroom teacher, and direct observation and interaction with the target students. Modifications in the objectives were then made on an ongoing basis in response to the daily performance data and observation of student behavior.

At the beginning of the first year, a series of meetings was held with the classroom teachers regarding implementation of project objectives within the

classroom setting. Social, motor, and communication objectives were demonstrated for one classroom, and training on procedures for measuring objectives and data keeping was completed. At least one project objective for each child was implemented within the classroom setting and several other facilities were used in addition to the gym and classroom in an attempt to generalize skills. These included a play field, an indoor area equipped with playground equipment, and a "moon walk" (an inflated play space providing a safe trampoline effect).

Considerations concerning child performance objectives. Here we would like briefly to state some of the criteria that governed our procedures in developing, reviewing, and, when necessary, redesigning behavioral objectives for the children.

1. Objectives should be developmentally based. This requires careful assessment of the child's current functioning, in terms of normal sequences of development in any of the skill areas to be taught, so that the child is developmentally ready to work on the objective. The objective should be logically placed within a sequence.

2. Objectives should be useful to the child, generalizable, and compatible with classroom and residence hall or home objectives. Unless there is coordination with the child's teachers and residential hall staff or parents, there is not likely to be any attention paid to the project's behavioral objectives at school, residence hall, or home. Such lack of coordination reduces the child's opportunities to generalize skills between settings, and may even cause misunderstandings between the project staff and others. Further, when children have very limited behavior repertoires, and when learning increments are small, it is wasteful to simply add behavioral objectives that have little relevance in other settings and are of no use to the child.

3. Objectives should be age-appropriate. Children should not be working on skills that will set them farther apart from normal agemates than they already are. These children, who may look bizarre and behave so differently from normal peers, do not need any more distance from chronological norms. For instance, although games such a pat-a-cake and treats such as piggy-back rides in the pool are rewarding and entertaining for younger children, they tend to make adolescents and young adults look silly. Thus, objectives should encourage age-appropriate activities and behaviors whenever possible.

4. Objectives should be teachable in real, not contrived, settings. The swimming pool, locker room, and gymnasium (on Fridays) offered three different but equally good natural settings for teaching a wide variety of skills within the project. Each setting provided unique opportunities, yet generalization among the settings was possible without contrivance. Further, having non-contrived settings made it possible to select objectives for children that could cross skill areas, or merge skills between skill areas. For instance, objectives could combine aspects of communication and social skills, or motor and social skills; such combinations of behavior occur naturally in normal life and therefore can easily be generalized into other environments such as the school classroom and playfield.

5. Objectives should take into account children's sensory abilities and deficits. This criterion is related to the issue of setting developmentally based objectives, but slightly different in that it involves adaptations of teaching procedures to accommodate specific sensory problems. For instance, a deaf-blind child can learn to communicate via signing, but the signing may have to be adapted so that the child can feel the hands of the signer. The signer may have to sign on the child's body, in his hands, or very close to his eyes instead of in space.

6. Objectives should be reviewed constantly through daily data collection and analysis. There is no way to be sure that objectives are appropriate, and that child progress is adequate, unless daily data are collected, charted, and analyzed. Such fine-focus attention to the child's progress alerts the staff to the need for changes in programs or objectives and enables them to make timely changes. Finally, such close attention to child progress makes it possible to provide more objectives for the more advanced children.

7. Objectives should be organized and stated so as to permit teaching that is based on behavior management procedures, with consistent cues and consequences, and that is logically sequenced, appropriately paced, and free of distractors. This subject is discussed in detail in the Behavior Management and Data Collection training module, but it is worth stressing here the importance of consistency and sequences in any instruction involving handicapped students. How the objective is stated will make a difference in the teaching.

Actual objectives for each of the project children throughout the 3 years of the program are given in Appendix C. Communication objectives ranged from "The child will hold an object placed in his hand for 5 seconds" to "The child will sign an object's name in response to the question 'What is the name?'" Gross motor objectives ranged from "While positioned prone over an inner tube, the child will lift her head independently for 10 seconds" to "The child will jump off bottom step, feet together, one hand held." The three most advanced students had swimming objectives as well. Social objectives ranged from "The child will respond to a sound by turning toward its source" to "After being towed on the inner tube and given the cue 'You same,' the child will tow another child on the inner tube for at least 10 seconds."

As noted previously, daily data were taken on the children's performance, which were charted each week. Decisions on termination or revision of objectives based on the data were made at weekly staff meetings.

Child Gains: Descriptions of Selected Students and Their Progress

The project students were divided into two groups: ambulatory and nonambulatory. Five of the students are ambulatory. They are identified as C. G., R. G., D. D., V. S., and K. B. All of them are legally deaf-blind, and on the state's Deaf-Blind Register. All have at least some comprehension of a few signs, and some are able to use signs appropriately in the context of structured objectives. Two of these students will be described at greater length.

Ambulatory students. K. B., born January 5, 1966, was 15 years old at the beginning of the swim program and 17 years, 6 months old at the end. According to testing in 1981 she had a bilateral severe-to-profound hearing loss, in addition to her visual impairment. She also suffered from spastic diplegia. Pretesting at the beginning of the program on standardized measures found her to be functioning at 15-16 months in gross motor development. Her social interactions were at the 9-1/2 months level, and her communication skills ranged from 0 to 1 months.

K. attended 65% of the program days the first year, 73% the second year, and 80% the third year. She achieved 22 of a possible 33 steps on objectives the first year, 17 of 27 the second year, and 11 of 24 the third year.

While K. was somewhat higher functioning than many of the other students, her learning was hampered by her extreme passivity and, at times, stubbornness. This was particularly in evidence in the first 2 years of the program, but improved somewhat in the last year. In general, she often waited to be cued for every step in a sequence--for example, in removing her clothes and putting on her swim suit. She did learn to signal her wants within the structure of working on objectives--for instance, signaling the tutor by touching to continue drying her hair, or by approximating the sign "food" to be given a lollipop. She tended not to be communicative spontaneously, but in the pool she would move toward other children and tutors and gave evidence of enjoying the water.

The hall staff, when questioned about the effect of the swim program on K., felt that she adjusted more easily to people as a result of the experience, and that she also played more with toys than in the past. They noted that when her tutor came to pick her up, she indicated that she recognized her by laughing.

At the end of the project, K.'s gross motor skills were at 23 months on the Bayley, her social skills ranged from 2 to 4-1/2 months with scatter to 24 months, and her communication skills ranged from 1 to 6 months with scatter to 9 months.

R. G., born September 19, 1969, was 11 years, 3 months old at the start of the swim program, and 13 years, 8 months old when it ended. While legally deaf-blind, R. had a mild-to-moderate hearing loss when aided, and had good use of his hearing. At the beginning of the program, R.'s gross motor skills as assessed by the Bayley were at the 24 months level. In the area of communication his skills ranged from 4 to 21 months, and his social interactions were at the 9 1/2 months level (Callier-Azusa, 1977).

R. attended 92% of the program days in the first year, 91% in the second year, and 91% in the third year. As this indicates, he had the benefits of both good health and consistency of programming. Both of these factors, in combination with his abilities, may have contributed to the gains on objectives he made during the program. He achieved 25 of a possible 41 steps on objectives the first year, 22 of 24 the second year, and 29 of 34 the third year.

Over the course of the program R. made progress in many different areas. The most impressive of these was his ability to communicate meaningfully using sign. At the beginning of the project he was signing only one word at a time, and his spontaneous signing was infrequent. By the end of the project he was routinely using four-sign utterances, which occurred both in the structured situation of working on objectives, and more importantly, in spontaneous interactions with his peer tutor. Because he was able to tell his tutor what he wanted to do when she asked him "What do you want?" this language use was very rewarding to him.

Over the same period, as R.'s independent use of language increased, his negative behaviors decreased. Whereas in the first 2 years he cried and staged tantrums frequently, by the third year this behavior was quite rare. Self-stimulatory behaviors such as high-pitched vocalizations and flicking his ears also decreased as his tutor reacted firmly and negatively to them.

R. also became somewhat more independent in his actions: for example, he began to go through the sequence of putting on his socks and shoes, reaching out to find each one, after he was given an initial cue. On one occasion, he was also observed to stand up and get an inner tube which was near him in the pool, a great contrast to the typically passive behavior of this population. One staff member observed that he also became more responsive to other children over the 3 years of the program. Whereas initially he had been oriented only toward adults, by the end he would reach out to investigate another child who was next to him. This development may have been encouraged by his social objectives during the project, in which he learned to tolerate holding hands with another student, and later to take turns riding and towing another student on an inner tube. The hall staff, questioned at the end of the project, said that R. now plays with toys instead of engaging in self-stimulation with them, and that he plays with a greater variety of toys.

At final post-testing, R.'s gross motor skills as measured by the Bayley were at 28 months. His communication skills ranged from 16-27 months, with scatter to 32 months. His social skills ranged from 12 months to 24 months (Callier-Azusa, 1978).

Non-ambulatory children. For most of the lower-functioning, nonambulatory children, auditory and visual assessments were problematic. Several of the children were thought to have near-normal hearing, but it was clear that this hearing was not functioning to allow learning via the auditory system. The children were enrolled in the Integrated Educational/Leisure Time Model for Deaf-Blind Children and Youth in order to teach them to use whatever residual hearing they had so that they could (1) be tested more adequately, and (2) begin to use their hearing to learn.

M. P., born December 2, 1976, was 4 years, 1 month old at the beginning of the program, and 6 years, 6 months old at the end. In addition to her visual impairment, she has athetoid cerebral palsy. Responses to sound were present but unreliable. On initial testing her communication skills ranged from 0 to 2 months, with scatter to 3 months (Callier-Azusa, 1977), her social interactions were at 2 1/2 months, with scatter to 5 1/2 months, and her gross motor skills as measured by the Bayley were at less than 2 months.

M. attended 79% of the program days the first year, 79% the second year, and 65% the third year. At the beginning of the program she cried very frequently when staff were not paying constant attention to her. One of her first objectives was therefore not to cry under these circumstances, and she achieved the objective, which had a generalized effect on her overall behavior. Because of her athetoid cerebral palsy, M. also had poor head control, and one of her gross motor objectives in the first year involved raising her head and holding it up for 1 second. She completed two out of three gross motor objectives during year 1.

M. achieved 15 steps out of 23 on her objectives the first year, six out of nine the second year, and five out of 19 the third year. This drop occurred partly because she had reached the limit of what she could do. In the second year of the project, M. was limited to one gross motor objective which required her to maintain her head in vertical position for 10 seconds. She completed three out of four of the objective's steps. Her communication objective was to increase body movement when her tutor talked to her, and she completed the three steps of this objective. Her social objective, to maintain eye contact with her peer tutor, was continued.

In the final year, M.'s social objective was to respond to a sound by turning toward its source. Her performance on this task was very inconsistent, though at times she gave what seemed to be very clear responses. Her gross motor objective was the same as in the second year, namely, to lift her head independently for 10 seconds. Once again, because of the changeable nature of athetoid cerebral palsy, she was able to perform the objective on some days but not on others, and she did not complete it.

The foregoing description illustrates some of the difficulties of devising objectives for very low-functioning children who are limited by motor disabilities, as well as by sensory impairments which are very difficult to assess accurately.

When questioned at the end of the project, most of the staff felt that there had been very little change in M., except that she had decreased crying to get attention, and one person felt that she turned her head and smiled more. The hall staff felt that the program had increased her physical strength and made her less querulous, but no other changes were noted. Her parents felt that she was happier and more active after swimming.

Standardized testing at the end of the third year showed M.'s social interactions to range from 0 to 4-1/2 months, with scatter to 10 months; her gross motor skills were less than 2 months on the Bayley; and her communication skills were at the 1- and 2-month level, with scatter to 3 months.

C. G., born March 7, 1971, entered the program in its second year; he was 10 years, 8 months old when he entered and 12 years, 3 months old at the end. According to testing in 1982, C. had normal hearing in at least one ear. He was visually impaired and also suffered from spastic diplegia, hydrocephaly, and a seizure disorder. On initial testing (November, 1981) C.'s communication skills ranged from 1 to 3 months, his gross motor skills were at 5-1/2 months on the Bayley, and his social skills ranged from 4-1/2 to 6-1/2 months, with scatter to 11 months.

C. attended 90% of the project days the second year and 94% the third year. He achieved 11 steps out of 23 of his objectives the second year, and 20 out of 31 the third year.

According to the project's physical therapist, C. was much less passive by the end of the project than he had been when he entered. In the fall of 1981, when staff members placed him on his stomach on the pool ledge, he would let his head sag back, resting it on his shoulders. He made no effort to move himself from place to place. By the end of the project he supported his head well, got into crawl position with minimal prompting, and made an occasional attempt to move his hands forward. He had also learned to propel himself short distances with his arms while floating on his back.

Other staff members noted great improvements socially, in addition to more independent movement. C. became more responsive and smiled more, looking generally happier. Hall staff also strongly agreed that he had become less irritable, was more responsive to others, and initiated more activities on his own.

On final testing, C.'s social skills ranged from 3 to 4-1/2 months, with scatter to 18 months, his gross motor skills were at 5 months on the Bayley, and his communication skills ranged from 3 to 7 months, with scatter to 9 months.

As these summaries indicate, the achievements of the children over the course of the project varied widely, depending on pre-existing differences in their developmental levels, as well as on their health status. In general, higher functioning children may be expected to achieve a greater number of steps on objectives, although personality factors such as motivation may interfere to seriously constrain progress. In the case of more severely involved children, their progress is likely to be limited both by their lack of control over behaviors (because of spasticity and/or developmental level), and by perennial susceptibility to infectious diseases. Despite such limitations, in the judgment of project staff, hall staff, and parents, all of the children benefited from the program on an affective basis, over and above the gains they made on instructional objectives.

Child Gains: Results of Pre-Posttesting Using Formal Test Tools

Evaluations using the tests described above were administered over the 3-year period of the project and indicate that significant gains were made by participating children within the areas of communication and social development.

As noted earlier, during the first year of the program deficits in several of the testing instruments were found; therefore several testing instruments were either modified or replaced in the second year. In addition, the treatment population changed between the first year and the two subsequent years because of safety and health problems posed by some of the children. As a result of these factors, analysis of the first year's data with those of the final 2 years is not meaningful. However, when the scores from the beginning of the second year of the program were compared with the final testing in the last year, significant growth was found.

Over the same period, only a few significant gains were found for the contrast group, who did not participate in the swim program but who did receive the same school services. Gains made by this group were substantially less than those made by the project children. It should be noted that there was only one significant difference between the treatment group and the contrast group at the time of the pretest in year 2. This was for the GATE overall score.

Results of test data were also analyzed to determine whether the project children made different progress over the summer months when the program was not in effect. It was found that no gains were made during the summer, and, in fact, a slight trend toward loss of skills was found. This information, together with the data showing overall gains made during the project, strongly indicates that gains were made by the project children, and that the gains were the result of the project activities.

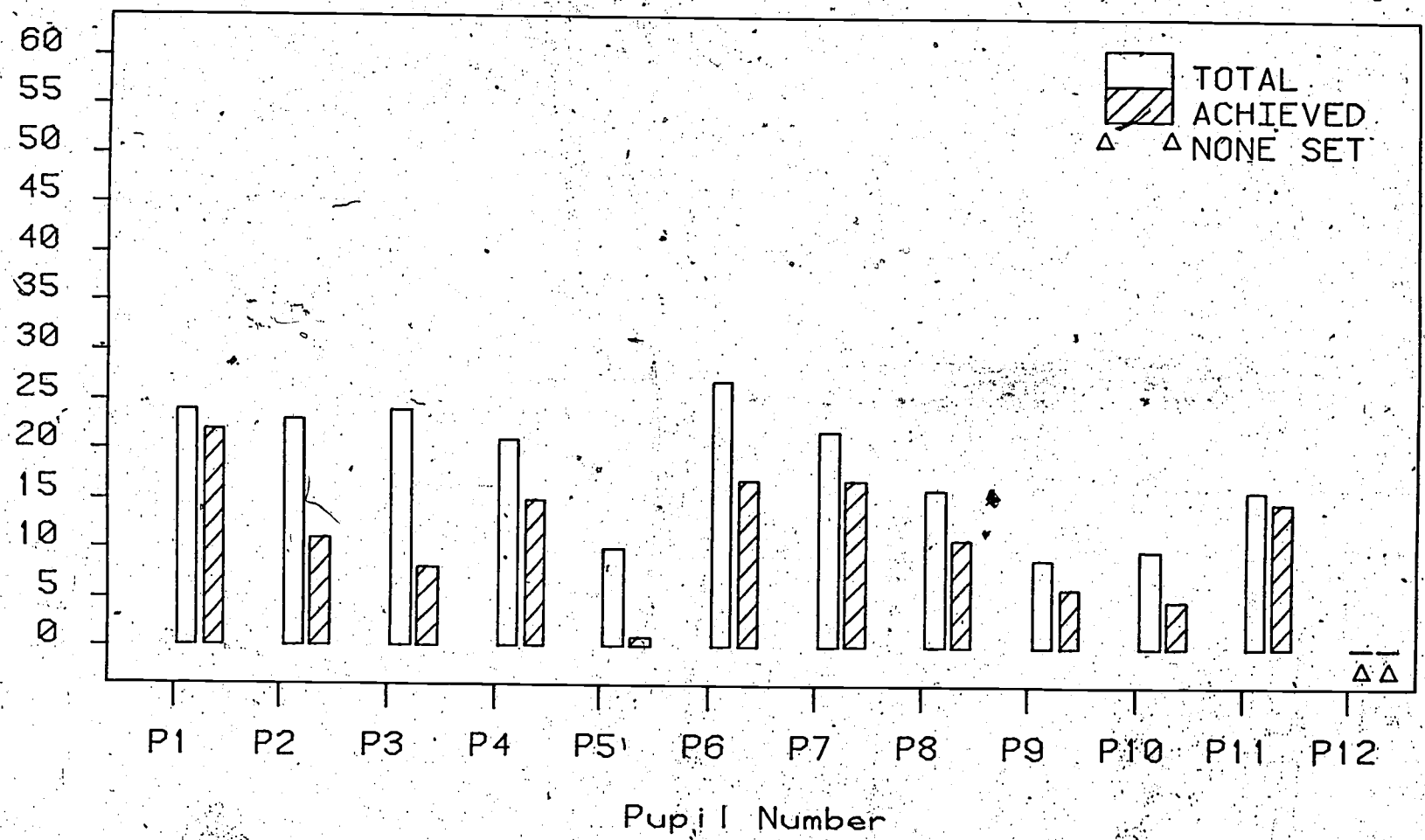
PRE-POST SCORES: Pretest Year 2 to Posttest Year 3
(One-tailed t tests)

Test	PROJECT CHILDREN Level of Significance	Pretest Mean	Posttest Mean	CONTRAST GROUP Level of Significance	Pretest Mean	Posttest Mean
GATE frequency (raw score)	.001	25.9	53.2	.05	12.2	28.2
GATE generaliz. (raw score)	.001	27.1	56.0	.001	14.8	34.0
GATE initiation (raw score)	.005	31.3	52.6	.09	13.8	21.9
GATE quality (raw score)	.001	14.2	43.3	.05	4.2	19.8
GATE overall (months)	.07	4.6	12.0	.01	2.7	4.0
C-A cognitive (months)	.001	2.5	5.9	.05	2.2	3.8
C-A receptive (months)	.05	2.8	5.9	.08	2.2	4.2
C-A expressive (months)	.05	2.7	4.5	.19	2.0	2.6
C-A adult social (months)	.35	7.0	6.6	.07	.75	3.0
C-A peer social (months)	.05	1.7	4.0	no pretest	----	----
C-A environ. soc. (months)	.15	4.5	6.3	.16	3.3	3.8
C-A postural con. (months)	.40	9.6	9.9	.36	3.6	4.0
C-A locomotion (months)	.06	10.0	8.3	.38	4.0	4.4
Bayley motor (months)	.15	12.7	13.7	.19	4.0	6.0
Fircrest motor (months)	.35	13.2	13.5	.36	4.9	5.4

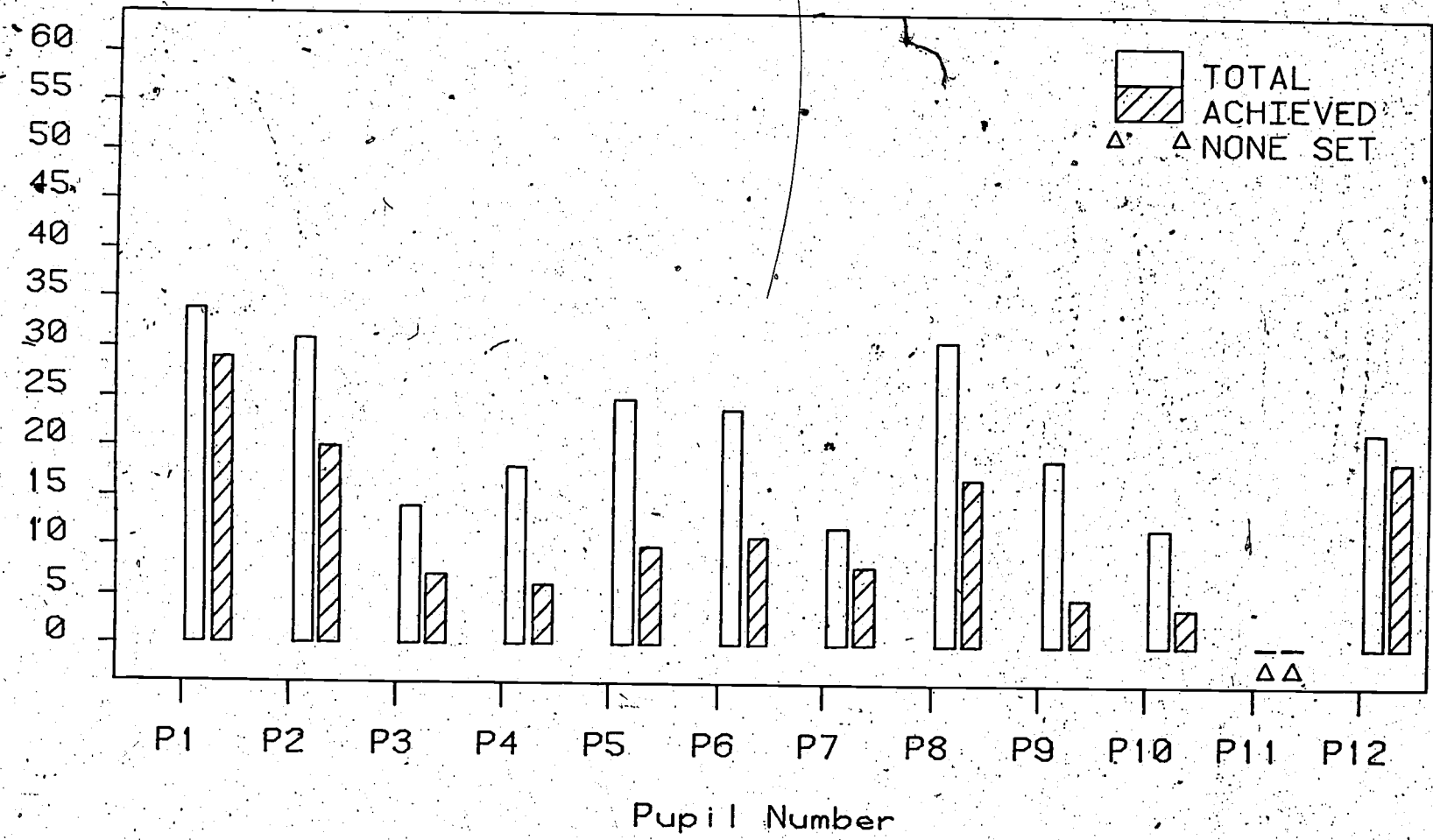
Child Gains: Objectives and Steps To Objectives Achieved

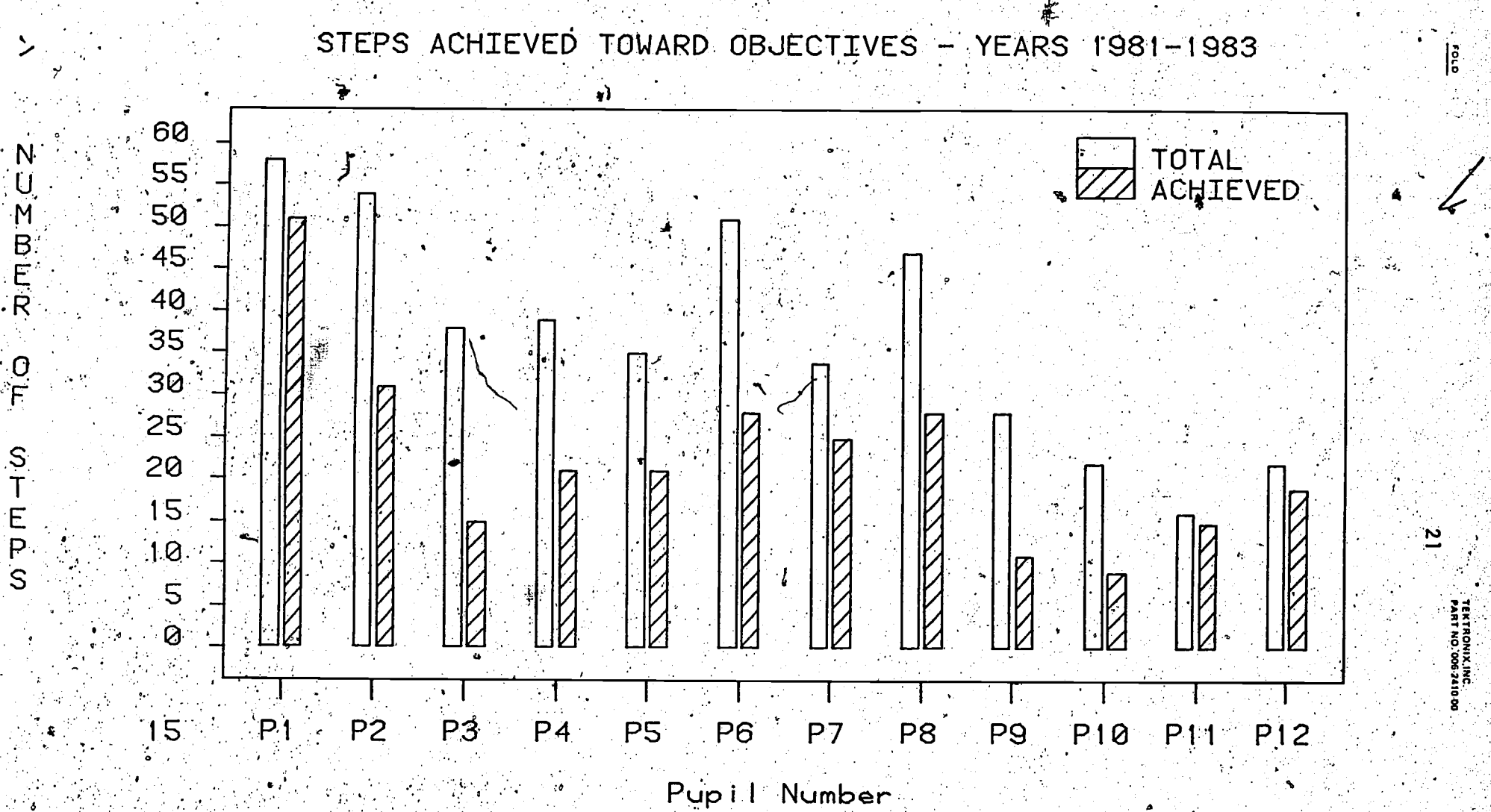
An additional way to review the gains of children who participated in the project is to look at the percent of objectives achieved compared to percent of objectives written for each child and the number of steps towards an objective accomplished. The following six graphs provide this information. The first three graphs reflect percent of objectives achieved and clearly illustrate that the amount of gain for many of the children in the project was substantial. Those who made little gain in percent of objectives achieved were profoundly impaired both physically and mentally. The second three graphs depict total number of steps achieved compared to total number of steps assigned to each child in order to achieve objectives. It is clear that many of the children made great gains. Those who did not were nonambulatory, profoundly motorically involved, and profoundly mentally retarded. It is, we believe, significant that even these children made some gains. Similar objectives and task analyses were not available for the control group.

STEPS ACHIEVED TOWARD OBJECTIVES - 1981-82

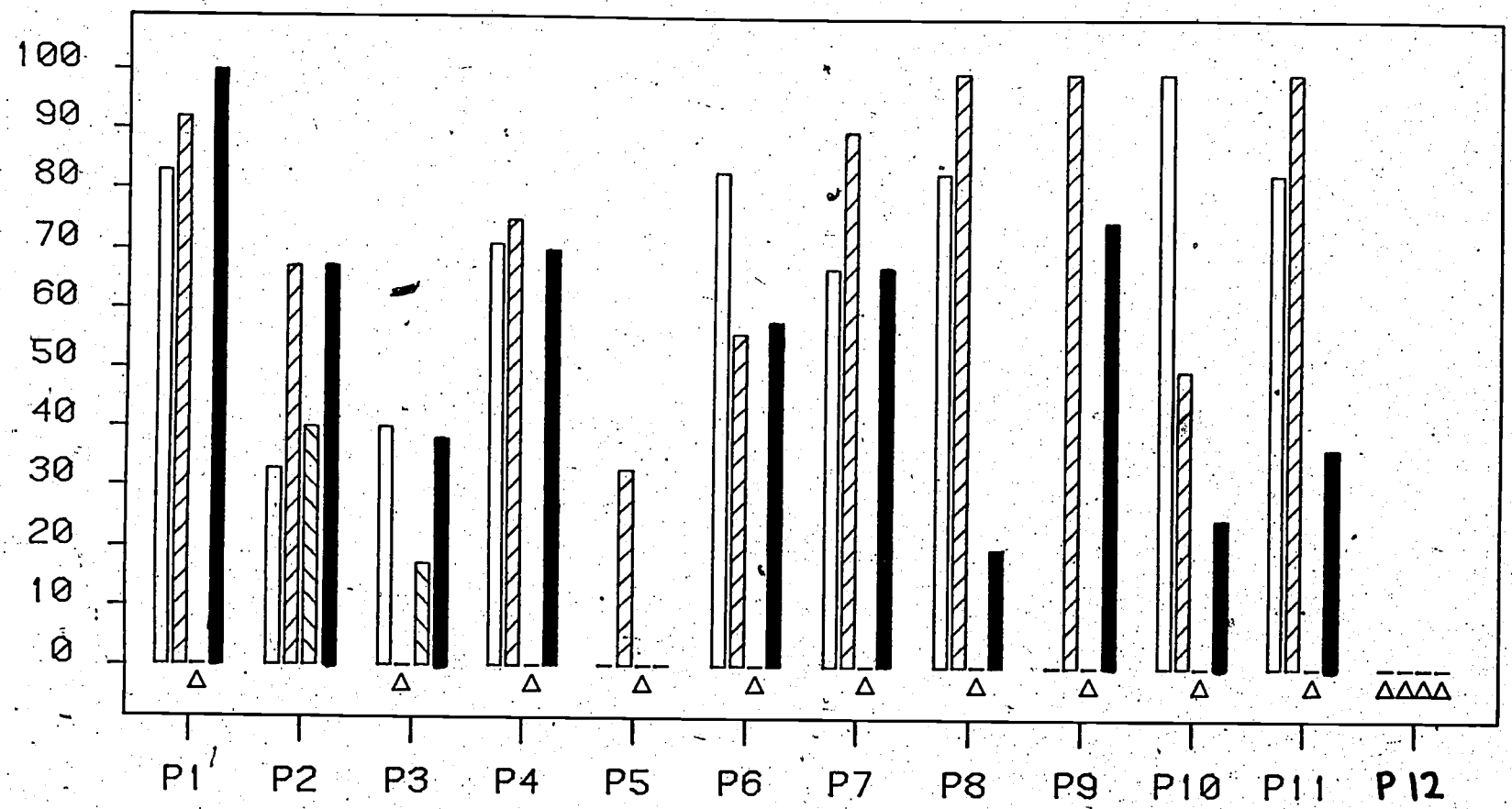


STEPS ACHIEVED TOWARD OBJECTIVES - 1982-83

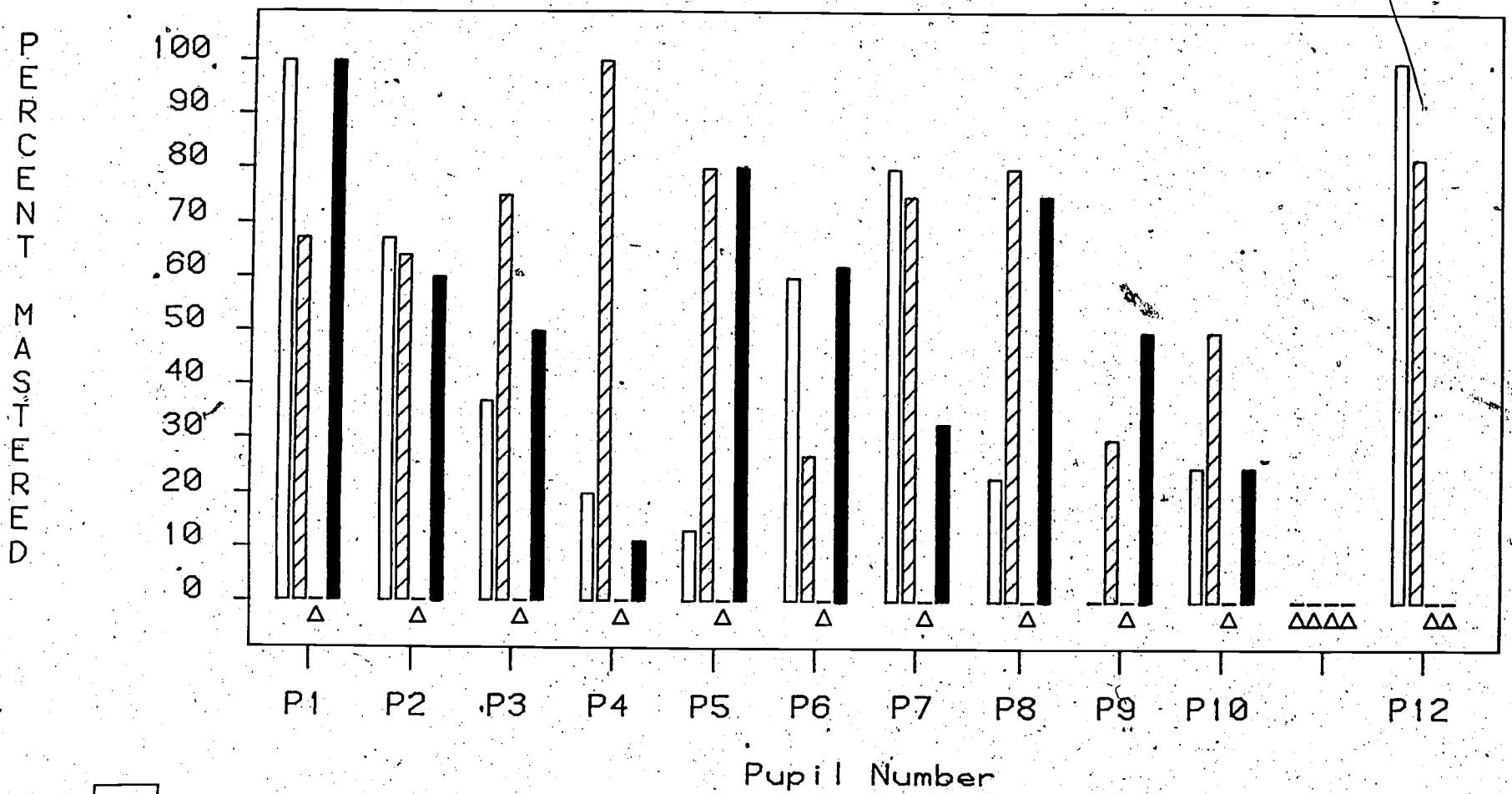



STEPS ACHIEVED TOWARD OBJECTIVES - YEARS 1981-1983
NUMBER OF STEPS
60
55
50
45
40
35
30
25
20
15
10
5
0
TOTAL
ACHIEVED
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
Pupil Number

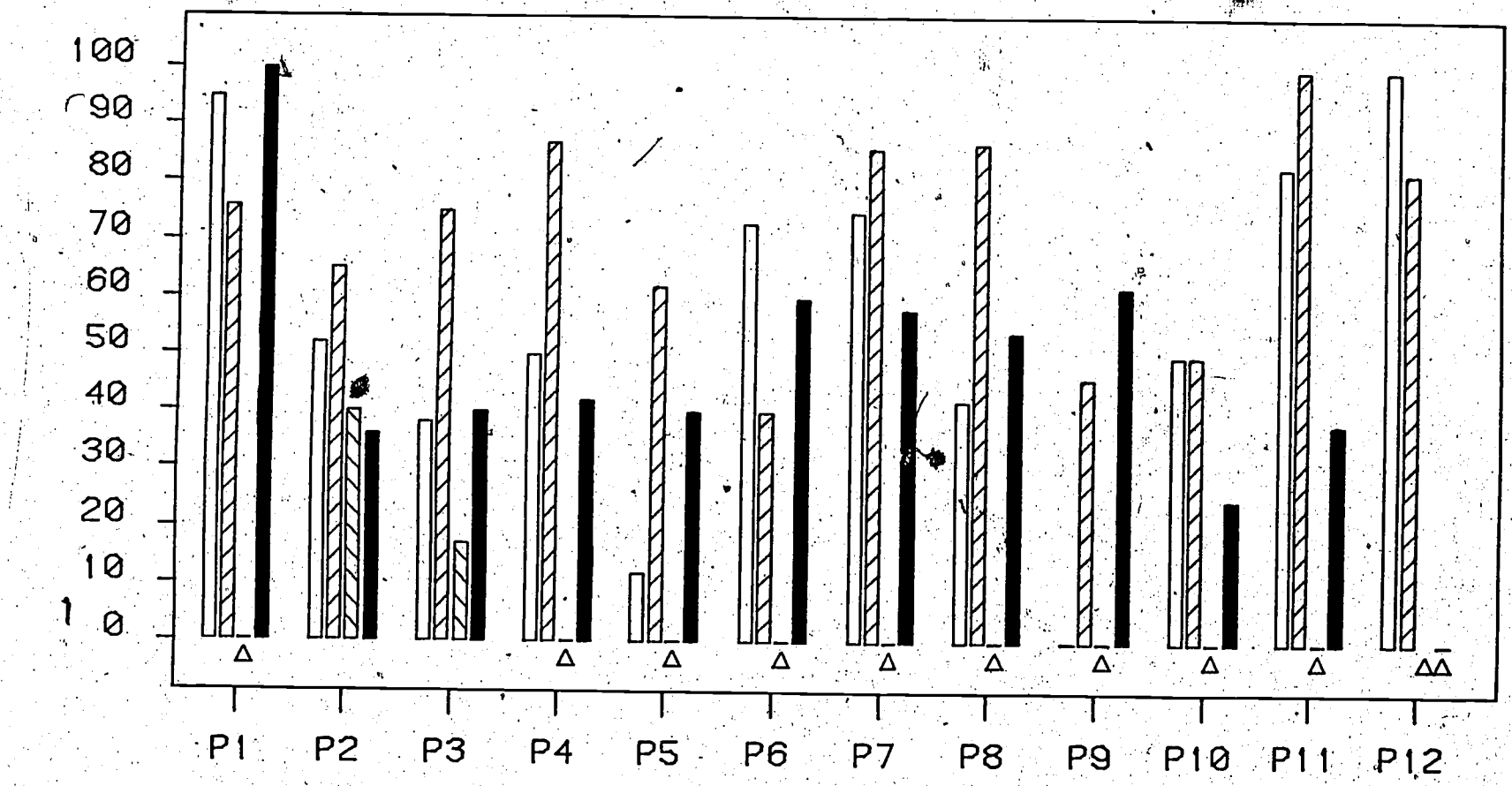
PERCENT OF STEPS ACHIEVED TOWARD OBJECTIVES - 1981-82



PERCENT OF STEPS ACHIEVED TOWARD OBJECTIVES - 1982-83



STEPS ACHIEVED TOWARD OBJECTIVES, YEARS 1981-1983



Child Gains: Comments by Teachers of Project Children

At the end of the project, the Principal Investigator and Coordinator sought the comments of teachers who had worked with project children in classroom settings regarding the children's progress over the 3 years of the model program. Teachers were asked to (1) note any changes over time that could be attributed to the water program; (2) comment on whether the children behaved differently in the water than on land; and (3) note any other relevant observations. The teachers observed qualitative changes suggesting that the water program, which combined educational and recreational features, had significant effects on the children's development. These comments are summarized in Appendix B.

Progress of Total Project: Charts By Objectives

Objective 1. To increase the social interactive skills of the target deaf-blind children across settings.

	Activity	Responsible Person(s)	Reporting Dates 12/31/82	4/31/83	9/31/83
1.1	Survey current social skill training and assessment tools	Principal Investigator Project Coordinator	C	C	C
1.2	Select and administer one assessment tool to establish baseline behavior in the social area	Principal Investigator Project Coordinator	C	C	C
1.3	Based upon assessment data, establish one social behavior to be taught each child across settings	Principal Investigator Project Coordinator	C	C	C
1.4	Revise IEP to include one new social behavior to be taught	Teachers Principal Investigator Project Coordinator	C	C	C
1.5	Select or develop a tool for collecting daily data	Project Staff	C	C	C
1.6	Implement use of daily data collection regarding social interaction skills	Water Therapist Core Project Staff Project Coordinator Peer tutors	O	O	C
1.7	Implement social objectives that can be utilized across settings	Water Therapist Core Project Staff Project Coordinator	O	O	C
1.8	Review data collected on daily basis weekly and monthly and revise programs as needed	Principal Investigator Project Coordinator	O	O	C
1.9	Posttest social behaviors to determine progress	Consultant Social Work Specialist	N	N	C

= Begun C = Completed O = Ongoing D = Delayed N = Not yet due

Objective 2. To increase communication skills of the target deaf-blind children across settings.

	Activity	Responsible Person(s)	Reporting Dates 12/31/82	4/31/83	9/31/83
2.1	Survey current verbal and nonverbal communicative tools	Communication Specialist	C	C	C
2.2	Select at least one tool for measuring daily skill acquisition	Communication Specialist	C	C	C
2.3	Based upon assessment data, modify IEP for each child	Communication Specialist	C	C	C
2.4	Implement a minimum of one new communication objective for each child	Communication Specialist	C	C	C
2.5	Review daily progress and revise as necessary	Principal Investigator	O	O	C
2.6	Posttest communicative progress on all input measures for purposes of summative evaluation	Communication Specialist	N	N	C

Key:
B = Begun C = Completed O = Ongoing D = Delayed N = Not yet due

Objective 3. To increase gross motor functioning.

	Activity	Responsible Person(s)	Reporting Dates 12/31/82	4/31/83	9/31/83
3.1	Survey and evaluate current gross motor assessment scales being used with the deaf-blind multihandicapped	Physical Therapist	C	C	C
3.2	Select and administer one assessment tool to establish baseline gross motor behavior	Physical Therapist	C	C	C
3.3	Based upon results of assessment, select from one to three motor behaviors which can be taught across settings	Physical Therapist	C	C	C
3.4	Revise IEP to include the newly identified motor behaviors to be taught	Teachers Principal Investigator	C	C	C
3.5	Select or develop an appropriate tool to collect daily data	Physical Therapist Project Coordinator Principal Investigator	C	C	C
3.6	Implement use of daily data collection regarding selected motor skills	Physical Therapist Water Therapist Project Coordinator	O	O	C
3.7	Implement activities to teach specified gross motor skills across settings	Physical Therapist Teacher	O	O	C
3.8	Review daily data weekly and monthly and revise program as necessary	Physical Therapist Water Therapist	O	O	C
3.9	Posttest gross motor skills which have been taught	Physical Therapist	N	N	C

K = Begun C = Completed O = Ongoing D = Delayed N = Not yet due

Indirect Service Objectives

Indirect service objectives included providing inservice training to the institution's hall staff and to volunteers (Foster Grandparents) who worked with the children. Working with the hall staff was particularly important because they were with the project children during the long periods when the children were not participating in educational programs, and carry-over between the educational and residential settings was very important to the project. During the first year, inservice training for the hall staff was carried on in 1-1/2 hour group sessions, 1 night a week for 9 weeks, and covered areas such as social development, communication skills, and physical management of deaf-blind children. The material for this training was developed without consulting the staff about their perceived needs. By contrast, in the project's second year, the hall staff were surveyed to find out what kind of information they felt would be useful to them, and the inservice training was tailored accordingly, and implemented on an individual basis. This approach was much more successful.

The process of providing training to the volunteer Foster Grandparents proved to have somewhat different pitfalls. The training module was presented to a group of 50 volunteers the first year and was well received. However, the module, even in a simplified form, was found to be too complex for this group. They also did not approve of pre- and post-testing, and balked at participating. Although verbal approval and thanks were extended to the staff, only 15 out of the 50 participants were willing to fill out an evaluation form. As a result of this experience, the module was revised still further and reduced to a few "Important Points" for each topic covered. The module was completed in Year One.

An example of the difficulties encountered in working with this population is suggested by the following quotation taken from one of the 15 evaluations. The question was: If the training was not useful, please explain.

> "None of my children are blind so I am not in need of aid. I have been around blind children at Salem, Oregon and they are very interesting, but not here in Washington. But they are a very precious people and I dearly love them."

At the conclusion of the project all staff were interviewed and asked to complete a form assessing the benefits of the swim project to the children with whom they had daily contact. Their responses to questions about the value of the project were uniformly positive. All of those interviewed felt that the project should be continued by Fircrest and that it should continue to be based on instructional objectives. This information was shared with the Fircrest administration. The form used, together with the tabulated responses, appears below.

Feedback from Hall Staff, Summer, 1983

We are asking for your opinions and comments about the deaf/blind swimming program that has been going on at Fircrest for the past 3 years. Your suggestions and opinions will be used to help evaluate the program so we can make improvements where they are needed, and keep the parts of the program that are most valuable. Thank you for your help.

		strongly agree	agree	undecided	disagree	strongly disagree
1.	I think the swimming program has helped the children. Comments _____	11	0	0	0	0
2.	The child usually recognizes the tutor. Comments _____	5	3	3	0	0
3.	The child seems to like the tutor. Comments _____	5	5	1	0	0
4.	The child has become more outgoing, less withdrawn. Comments _____	3	0	8	0	0
5.	The child is more responsive to others. Comments _____	4	2	4	1	0
6.	The child is less crabby. Comments _____	1	4	5	1	0

7. The child initiates more on his/her own. Comments _____	4	2	4	1	0
8. The child self-stims less. Comments _____	2	2	6	1	0
9. It was important that the tutors were close to the same age as the children. Comments _____	3	5	2	1	0
10. Tutors were on time picking up children and bringing them back. Comments _____	2	8	1	0	0
11. The tutors and staff were friendly and cooperative. Comments _____	8	3	0	0	0
12. The tutors dealt with the children safely and competently. Comments _____	8	3	0	0	0
13. I was given opportunities to talk with the project staff about the children and the program. Comments _____	4	7	0	0	0

14. The services provided were new to the children, rather than duplication of existing services. Comments _____	7	1	3	0	0
15. The purpose of the program was clearly explained to me. Comments _____	5	6	0	0	0
16. Fircrest should continue the program after the federal funding runs out. Comments _____	11	0	0	0	0
17. The program should continue focusing on teaching the children objectives. Comments _____	8	3	0	0	0
18. The program should continue, but should change the focus to recreational swimming only. Comments _____	0	0	0	11	0

Please rank the top three most important benefits of the program.

_____ extra attention
_____ long-term relationship with a peer
_____ exercise
_____ relaxation in warm water
_____ daily instruction
_____ contact with other handicapped children
_____ change of environment
_____ change of activity
_____ other (please specify)

Thank you for your time in answering these questions, and including any comments. This information will be very useful in deciding how the program will be run in the future.

A chi-square analysis was used to determine the level of significance of these questionnaire results. In order to perform the analysis the items must predict in the same direction (i.e., the choice of "strongly agree" must always be a response indicating a favorable reaction to the program, and a response of "strongly disagree" must always be a response indicating an unfavorable reaction); therefore, the direction of item 18 was reversed for the analysis.

The chi-square analysis examined the 198 responses (eleven surveys, each containing eighteen responses) to determine whether the pattern of responding demonstrated real differences in hall staff opinion, or whether the response pattern could have occurred purely by chance.

A chi-square value of 153 was found, which is associated with $p < .001$ ($df=4$). This indicates very strongly that the favorable results obtained on the hall staff survey reflect a real difference, rather than a difference due to chance.

The response pattern expected by chance, and the response pattern actually observed, are presented below.

	strongly agree	agree	undecided	disagree	strongly disagree
expected frequency	39.6	39.6	39.6	39.6	39.6
observed frequency	91	65	37	5	0

chi-square = 153.01 (chi-square critical for $p < .001 = 18.46$)
degrees of freedom = 4

Indirect Service Objectives Progress Charts

Objective 4. To increase the cross-disciplinary knowledge and technical skills of the paid teaching and support staff in physical management, water management, social development, and communication skills of deaf-blind children.

	Activity	Responsible Person(s)	Reporting Dates 12/31/82	4/31/83	9/31/83
4.1	Develop written materials to be distributed across disciplines	Project staff	C (Revised)	C	C
4.2	Conduct inservice training for all staff	Project staff	C	C	C

Key:
B = Begun C = Completed O = Ongoing D = Delayed N = Not yet due

Objective 5. To provide inservice training to volunteer ancillary service providers in the etiology of handicapping conditions, physical and water management, social development and communication skills, and basic signing.

	Activity	Responsible Person(s)	Reporting Dates 12/31/82	4/31/83	9/31/83
5.1	Develop written and graphic materials for training volunteer and other care providers not engaged in direct care	Project staff	C (Revised)	C	C
5.2	Conduct inservice training in each setting in which child training will occur	Project staff	C	C	C

Key:
B = Begun C = Completed O = Ongoing D = Delayed N = Not yet due

Objective 6. To increase positive attitudes and knowledge of junior high and high school peer tutors about deaf-blind children

	Activity	Responsible Person(s)	Reporting Dates 12/31/82	4/31/83	9/31/83
6.1	Junior and senior high school staff members will be tested on attitudes toward deaf-blind students prior to and following participation in Project	Social Work Specialist	O	O	C
6.2	Junior and senior high school peer tutors participate in inservice training prior to project participation	Project teaching staff	O	C	C
6.3	Each staff person will develop an inservice training module in his/her specific areas:		C	C	C
	general background on visual and hearing impairments	Principal Investigator			
	general background about the deaf-blind	Principal Investigator			
	specific information about deaf-blind project population	Principal Investigator and Project Coordinator			
	water safety	Water Therapist			
	gross and fine motor development	Physical Therapist			

Activity	Responsible Person(s)	Reporting Dates 12/31/82	3/31/83	9/31/83
appropriate handling; including guiding ambulatory students as well as lifting and moving nonambulatory students	Physical Therapist			
communication	Communication Specialist and Principal Investigator			
social behavior	Principal Investigator Project Coordinator			
social adjustment	Social Worker Principal Investigator			
data keeping	Project Coordinator			

Key:
B = Begun C = Completed O = Ongoing D = Delayed N = Not yet due

37

Summary of activities under Objective 6.0: Inservice training for high school peer tutors.

The inservice training has been described in the summary statement. Here follows an example of an inservice training schedule, and peer tutor test scores on pre- and post-training of the third year of the project.

Sample Inservice Training Schedule. Roman numerals stand for session numbers.

PEER TUTOR

INSERVICE TRAINING SCHEDULE

Fall 1982

Rm A Fircrest
Activities Bldg.

Mon.	Tues.	Wed.	Thurs.	Fri.
Oct. 4 Intro. to Program Intro. to D-B Sandy Hannes	5 Behavior Modification & Data Collection I Ginny Swisher	6 Behavior Modification & Data Collection II Ginny Swisher	7 Social Skills I Carole Bartolini	8 Behavior Modification & Data Collection III Ginny Swisher
11 Social Skills II Carole Bartolini	12 Gross Motor I Normal Dev. Katy Haigh	13 Gross Motor II C.P. Katy Haigh	14 Communication I Carole Bartolini	15 Communication II Carole Bartolini
18 Handling, Dressing Body Mechanics Land Safety Haigh	19 Pool Orientation Water Safety Meagan Thorn	20 Hands On All Staff	21 All Staff	22 Attitude Clarification I Judi LeConte

Pre-Post Test Scores

Peer Tutor Inservice Training

October 1982

Pre % Correct	Post % Correct	Module
10%	96%	Communication
49%	88%	Social Skills
60%	77%	Gross Motor
45%	74%	Safety
38%	70%	Behavior and Data
40%	81%	Overall Training (all 5 tests)

Attitude survey. The Peer Tutor Attitude Survey (Appendix A) was given three times during each project year, once before and once after inservice training, and once at the end of the year. At the close of the project, the data from the three administrations to the three groups of tutors were subjected to analysis of variance in order to determine changes in tutor attitudes during their work experience. When the data from the first and third administrations for all years were compared, statistically significant changes were found in the tutors' responses to seven questions. The items were 1) All handicapped individuals should receive Special Education programs throughout childhood and adulthood, regardless of cost (change in positive direction, $p = .04$); 2) For the severely impaired individual an educational program is very important (change positive, $p = .00$); 3) There is a lot that can be done for institutionalized children/adults beyond making them comfortable and well fed (change positive, $p = .05$); 4) Disabled children are pretty much like any other children once you get to know them (change positive, $p = .00$); 5) Disabled people, who look different, make me very uncomfortable (change toward disagree, $p = .01$); 6) I would never care for a child who drools all the time (change toward disagree, $p = .01$); 7) One can feel strong affection for the severely impaired individual (change positive, $p = .00$).

In addition to the formal assessment by means of the Attitude Survey, the tutors were asked at the end of each year to comment on their experiences. These comments were elicited in group discussions. The discussions revealed tutors to be very perceptive about their work and exemplified many ways in which they had been affected by contact with the handicapped children. They were attached to the individual children and concerned for their welfare, and they had taken the project goals for their own. They were emphatic about the project's benefits to the children, saying that it should be continued because of the progress they had seen in the children. They also felt that it was important that more tutors be hired, to increase public awareness and experience with the handicapped even more. As one person said, the project "...gives the public an opportunity to experience what they're like and notice that they're really people..." and another commented that the handicapped children "each have an individual personality that needs to be developed." (Further comments appear in Appendix F.)

At the end of Year Three, six of the ten participating tutors indicated their intention to work in either special education, developmental disabilities, or physical therapy.

Objective 7. To develop inservice training materials in packages that can be widely disseminated upon approval.

	Activity	Responsible Person(s)	Reporting Dates 12/31/81	4/31/82	9/31/82
7.1	Conduct staff needs assessment on inservice training needs	Principal Investigator Project Coordinator Materials Specialist	C	C	C
7.2	Prepare inservice materials	Principal Investigator Project Coordinator Materials Specialist	C	C	C
7.3	Field test inservice training packages	Principal Investigator Project Coordinator Materials Specialist	C	C	C

Key:
B = Begun C = Completed O = Ongoing D = Delayed N = Not yet due

41

Parent Involvement

We anticipated minimal parental involvement in the program because our parents were spread out geographically - from the San Juan Islands to Idaho--and "burn-out" is not uncommon among parents of children like these.

Our expectations proved to be accurate. Consequently, our parent involvement program was designed to provide information and opportunities to parents without requiring active participation unless they so desired.

A meeting was held at the beginning of the project (February, 1981) to which all parents of project children were invited. Six parents of three children participated in the meeting. The project staff explained the goals of the project and expressed the desire to assist the parents in any way possible. The parents who attended the meeting were very enthusiastic about their children's participation but did not wish to be involved to any great extent. Information was given about the activities of the State Coordinator for the Deaf-Blind and parent meetings he was providing. One set of parents was already attending these meetings. The others were not interested in attending.

A needs assessment survey (Appendix D) was given to those parents who attended the meeting and sent to the parents who did not attend. All assessment forms were returned but two parents wrote on their forms that they did not wish to respond. Of the six who responded, the major request for assistance was simply for information once or twice a year from a staff member (either in person or in a letter) regarding their child's progress.

These parents have been heavily involved with their profoundly impaired children for so long that they are apparently experiencing a type of burn-out. Although they were very interested in their children's welfare, they did not want to be actively involved in the project on a regular basis. In order to provide information but not demand participation, the project staff sent to all parents of project children pictures of their child participating in project activities, as well as copies of newspaper articles featuring the program and a letter describing the activities of the past year. We made a scrapbook about each child, with information and pictures, for each parent. We continued to send pictures and new information on a regular basis so that parents were kept informed.

In the final half-year of the project, the staff reviewed progress to date and discussed with parents possible options for continuing the program after the cessation of federal funding. Parents expressed strong interest in continuation of the program and seven parents sent letters to the Superintendent of Fircrest, asking him to support the program the following year. Fircrest has agreed to continue the program for the next 2 years.

At the end of the project a feedback form (Appendix E) was sent to the parents, asking them to evaluate the benefits of the program to themselves and their children, and to assess their needs for the future.

Eight of the 11 sets of parents returned the form, and their responses will be summarized here. The first question was "Do you feel the swim program benefited your child?", and eight out of eight respondents said "yes." The parents were then asked to rank order the aspects of the program they felt were most important. Two families gave first place to "extra attention," and two ranked "exercise" first. The other families gave first place to "daily instruction on objectives," "change of scene," and "relaxation in warm water."

For second rank, three families nominated "relaxation in warm water," and two "exercise." Others mentioned "change of scene" and "daily instruction on objectives" for second place. For a rank of three, two families said "change of scene," two said "extra attention," and two said "exercise." (Note: Some people merely checked categories, or only gave one or two rankings.)

The parents were also asked to rank the main benefits to their children. Five of them gave the first rank to "physical" benefits, one awarded it to "social" benefits, and one said "all." For second rank, two families said "emotional" benefits, two "physical" and two "social." For third place two families said "emotional," one said "social," and one said "language."

When asked about the program's benefits to themselves, three families gave first rank to "knowing the child was getting 1-to-1 attention." Other categories ranked first were "knowing the child was receiving extra instruction" and "knowing the child was having contact with non-handicapped peer."

The parents were asked what differences they saw in their children when the program was not operating (e.g., during vacation). Responses included differences in restlessness and mobility, the child's activities being limited to communication and play, a child smiling less and being stiffer physically, a child sleeping more than usual from inactivity, and a child not doing anything.

None of the parents perceived differences in the hall staff's attitude to the child as a result of the program. When asked whether a recreational swim program would have been as beneficial as the project's program with its instructional objectives, six of the families said "no" and two said "yes." When asked whether they thought the program would have been just as effective if run by available institution staff, without bringing in young peer tutors from the community, six said "no," one said "yes," and another said "yes" with the note "Only if the program is carried out with specific goals and objectives to achieve."

The parents were also asked to give their assessments of their children's needs for the future, in the areas of physical needs, recreational needs, social/relationship needs, emotional needs, living arrangements, medical needs, and equipment needs. The responses were as follows:

> Physical needs: Therapy--one-on-one swim program; "This program has helped V. to become more coordinated and more mobile. It has also helped to trim her down. She needs more of this program"; "J. has very limited physical development and abnormal muscle tone which limits all fine motor skills. She is non-ambulatory and relies on others to eat, dress, for

toileting, grooming, bathing, and total care"; "As much as possible activity, so he won't sleep so much--needs stimulation"; "continued development of physical coordination which will aid self-help skills"; "I don't know"; "Therapies to strengthen her muscular development to have more mobility by herself."

Recreational needs: "Don't know"; "Needs more swimming time"; "Getting out in open air when possible"; "Due to physical and developmental handicaps, J. is unable to initiate or independently participate in leisure activities. J. appears to enjoy music and swimming or being in the swimming pool. She shows pleasure by smiling and vocalizing."; "This gave her the opportunity to be doing something she enjoys and at the same time benefiting by the program;" "One-on-one social contact."

Social/relationship needs: "Interaction with other handicapped children"; "V. needs to learn to relate to other people"; "J. enjoys interacting with people. She loves attention..."; "In contact with different adults who give him special attention--he thrives on that."; "Needs to interact with other people"; "Don't know"; "To at least be able to socialize and vocalize her needs."

Emotional needs: "N/A"; "Don't know"; "To feel loved"; "Needs a foster Grandmother, needs lots of love and cuddling--she enjoys attention and handling." "I believe this activity helps keep her tantrums under control." "One-on-one attention."

Living arrangements: "Would like to see her eventually in a group home"; "Due to multiple physical problems, developmental handicaps, J. will require heavy nursing care preferable in an IMR facility"; "What he now has with people helping him to eat and care for his personal hygiene"; "Same."

Medical needs: "Help in taking meds for his seizures and to be sure he's getting proper foods and vitamins"; "Same"; "Because of a seizure disorder (severe), fragility (osteoporesis), mental retardation, J. requires constant supervision by qualified medical personnel."

Equipment needs: "Wheelchair continued use"; "Due to visual impairment, glasses; due to hearing impairment, hearing aid; use of ...Mulholland wheelchair; use of wedge for proper positioning"; "Don't know"; "N/A"

One parent appended the following note: "The deaf-blind swim program is the greatest program my child has participated in--since his institutionalization at either Rainier or Fircrest.

It would be a great loss indeed if the program was not to continue."

General Dissemination

Over the 3 years of the project, four presentations have been made about the project at the national conventions of the Council for Exceptional Children (CEC) and the American Physical Therapy Association. In addition, there have been presentations at state meetings of the CEC and the American

Speech and Hearing Association. Other presentations have been made to 1) special education professionals at the conference of the Program Development Assistance System, 2) teachers of the visually impaired, 3) master's degree students in speech pathology and physical therapy at the University of Washington, as well as graduate students at the University's Child Development and Mental Retardation Center, 4) the Washington Pediatric Special Interest Group for Physical and Occupational Therapists, 5) Washington State Deaf-Blind Staff Workshop, 6) Workshop for Personnel Serving the Moderately and Severely Handicapped, 7) Friends of Fircrest, 8) students in special education and speech and hearing sciences at Central Florida State University, and 9) the Educational Testing Service, Princeton, New Jersey. There have also been two poster presentations at TASH conventions.

Newspaper articles about the project have appeared in the Everett Herald, the Shoreline Journal, the newsletters of Shoreline and Shorewood school districts, and the Seattle Times.

A videotape about the project was made, filmed by Media Services of the Child Development and Mental Retardation Center, scripted by the project staff. The videotape has been used for training and is slated to be presented at the TASH convention in October, 1983.

Thus far, three journal articles on various aspects of the project have been published and a fourth has been accepted for publication. Four more are soon to be submitted.

Unanticipated Benefits

Although the project staff have always believed that the peer tutors were the project's most important link with the community, the ripple effects of their involvement were more extensive than we had anticipated. Tutors discussed their work with a very wide circle of friends, acquaintances, family, and church, community, and social groups; as a result of these discussions, the project became very well known in the community and beyond. Many visitors to the project were people who had heard about it from the tutors. News of the project spread as far as Norway, where one tutor was an exchange student. Parents, other family members, and friends visited the program and several parents attended peer tutor inservice training sessions with their children. About 36 people visited the project during the pilot year; during the second year, it drew over 100 visitors. Fifty-three visitors came during the third year. For many visitors, including members of the peer tutors' families, learning about handicapped persons was very new; they have shown great interest in sharing their new knowledge with others.

As noted earlier, the peer tutor program attracted much attention from the media. Copies of articles about the program, most having pictures, were much sought after by the tutors, who shared them with friends and relatives across the country. In fact, ten of the 30 tutors hired in the second year became interested in the program as a result of knowing someone who had been a peer tutor the year before, or through reading a newspaper article. The program was featured in a TV series about mental retardation.

Tutors increasingly expressed their interest in the children assigned to them through activities beyond the project's work scope. During weekends and holidays, when the project was not in session, tutors visited their deaf-blind students at Fircrest. One tutor volunteered to work in a residence hall at Fircrest during Christmas vacation. She presented some of the material she learned to the rest of the tutors as part of an inservice training session in January. Another tutor worked regularly in a classroom for deaf-blind students for credit in a high school child development class, and convinced a non-tutor friend to do the same. Two tutors selected the topic of deaf-blindness to study for a special project at school; they wrote papers and presented the information to their high school classes. One tutor made a presentation about the project to a Water Safety Instruction class in Yakima during vacation. Two tutors accompanied their students on a shopping trip for clothes; one expedition culminated in a dinner downtown. Several tutors donated swim suits to project children, and all tutors donated tactilely stimulating toys.

Tutors did many "extras" for their deaf-blind students, such as washing their hair while showering after swimming, and taking their swim suits home to launder them. Five tutors applied for the position of counselor at various summer camps for handicapped children in the Seattle area, including the Prader-Willi Camp, Easter Seals Camps, and camps for visually- and hearing-impaired children. One tutor took a second tutoring job at Fircrest in addition to working in the project; in the second position, she worked one-to-one with a 30-year-old multihandicapped blind man to ready him for community placement.

Another unanticipated benefit derived from the fact that the project shared locker room facilities with other community groups, including the Arthritis Foundation's Swimming Program. Such close contact with others led to increased interest in deaf-blind children by members of the community. Over the course of the project's 3 years, these people became increasingly comfortable with the children, learning their names, asking questions about them, approaching the children, and talking to them. In one case, this direct involvement inspired a woman to sign up for the Foster Grandparents Program.

While a formal program of information dissemination to professionals and practitioners is a critical component of a model program such as ours, we believe that by involving the community directly, as we did through the peer tutors, we have achieved another important kind of dissemination. The original RFP that outlined the purpose of model programs such as ours emphasized the need to increase community awareness about severely handicapped persons. Through the peer tutors, a constantly expanding circle of community persons and groups became involved in the lives of our deaf-blind students.

Concluding Statement

The project staff wish to note that implementation of this program over 3 years has been an exceptionally rewarding experience, both professionally and personally. In the original proposal we submitted to the U.S. Department of Education, we noted the following:

> . . . . The student population selected for this program imposes certain constraints in the interpretation of "integration." . . .

> The impact of the [children's] various handicaps produces a multiplicative rather than an additive effect, the results of which make this the most challenging and the most difficult population to teach in the school district.
>
> We believe it is unrealistic to expect that education in the traditional sense can take place immediately with the target population, and that we would be mistaken to promise outcomes in which integration occurs in an educational setting per se. . . . Our position, therefore, is that integration must be a gradually evolving process that depends in part on the children's development of the most basic social, communicative and motor skills, which it will be one purpose of this program to foster. Outcomes we can reasonably expect to achieve are that (1) social integration of the target population will occur more often and more meaningfully than it does at present; that (2) the model will develop the potential for future integration of the target population as well; and that (3) the model will be useable in other settings to increase integration of other young persons who have serious and significant impairments.

Over the course of the 3-year project, our choice of setting and focus--a combined recreational and educational program implemented in a community recreational setting--was wholly validated. As the children's teachers noted (see Appendix H), our students achieved benefits that carried over to their classrooms; and as the hall staff noted, these benefits were felt in the residential setting as well. The model we have developed is transportable to other projects and settings and, if replicated, should yield benefits to wider circles of children. Over 3 years, the project students enjoyed companionship and instruction from a group of highly competent and well trained nonhandicapped tutors, many of whom were actual agemates, in an integrated environment. According to Brinker and Thorpe (August, 1983), ". . . in order to truly transform the attitudes of society about handicapped students, they should be introduced to nonhandicapped students as individuals rather than as a group (page 33)." By establishing one-to-one contact between severely handicapped students and nonhandicapped tutors, our project made a significant contribution to the process of attitude change. This is certainly reflected in the comments made by peer tutors (Appendix G) and in the ever-widening circle of people who learned about the project from them. Clearly, an important step in successful integration of handicapped and nonhandicapped people is to create an environment in which openness and acceptance of differences are paramount. This project offers a model for creating such an environment.

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Appendix A

Peer Tutor Attitude Survey

ATTITUDE SURVEY

I. Information

Last 4 digits of phone No. ____

Please complete the following information:

Date _____

1. ____ Male
   ____ Female
2. Age: _____ years
3. Last grade in school: _____

4. Have you had any personal life experience with a disabled or mentally retarded person? ____ yes ____ no

5. If yes, did this experience involve:

   ____ immediate family (circle relationship - brother, sister, parent)
   ____ close relative (circle - cousin, aunt, uncle)
   ____ neighbor
   ____ friend

6. Have you ever worked with a disabled or mentally retarded person:
   ____ yes ____ no

   If so, was it:
   A. Volunteer experience ____
      where _____
   B. Educational/work experience _____
   C. Other _____
      explain

7. Are you interested in working with disabled or mentally retarded people as a life goal?
   yes ____ no ____

II. Questionnaire Instructions:

On the following pages you will find a series of statements about people with disabilities. These are not true/false statements; there are no right or wrong answers. Just give your own opinion regarding each statement by a check-mark in one of the boxes as follows:

Example:	Strongly Agree (SA)	Agree (AG)	Tend to Agree (Tend to AG)	Tend to Disagree (Tend to DS)	Disagree (DS)	Strongly Disagree (SD)
The stage clothes worn by the musical group KISS are the major reason for poor moral standards in young adults.						

Please respond to all Statements

STATEMENTS	OPINIONS					
	SA	AG	Tend to AG	Tend to DS	DS	SD
1. It seems unjust to spend twice as much tax money for educating a severely handicapped child as for a normal child.						
2. Extensive surgical procedures, such as repair of congenital heart defects, should be performed on severely handicapped children to prolong their lives.						
3. Severely impaired children can be educated if people are willing to take time.						
4. All mentally retarded children have noticeable physical characteristics which differ from normal children.						
5. When a handicapped child is kept at home beyond 2 or 3 years of age, there is generally an adverse effect upon their brothers and sisters.						
6. All handicapped individuals should receive special educational programs throughout childhood and adulthood, regardless of costs.						
7. Although the handicapped child may be a burden to the family, he/she is often a joy as well.						
8. All handicapped people should be prevented from having children by a painless operation.						
9. For the severely impaired individual an educational program is very important.						
10. Severely handicapped people are better off in institutions with others of their own kind.						
11. Few, if any, of the severely impaired are capable of forming wholesome friendships with others.						

STATEMENTS	OPINIONS					
	SA	AG	Tend to AG	Tend to DS	DS	SD
12. There is a lot that can be done for institutionalized children/adults beyond making them comfortable and well fed.						
13. The severely impaired individual has no feelings and does not recognize his/her condition.						
14. Many severely impaired children can be trained to live outside of institutions.						
15. Disabled children are pretty much like any other children once you get to know them.						
16. It is unfair to normal children to have physically/mentally disabled children in the classroom.						
17. Everyone can do something productive and meaningful if given an opportunity.						
18. Specialized education for the handicapped should receive financial priority over education for normal children.						
19. I think it is wrong to laugh about an individual with very severe physical and mental impairments.						
20. I would prefer to care for a normal child than a severely handicapped child.						
21. Disabled people, who look different, make me very uncomfortable.						
22. I expect all of the Deaf-Blind children in this project to have cute mannerisms despite their disabilities.						

Remember: Just respond to the following statements by checking the level that most closely matches your feelings at this particular time. Do not be concerned about what you should feel - just answer as you really feel. Be honest!

STATEMENTS	OPINIONS					
	SA	AG	Tend to AG	Tend to DS	DS	SD
23. I would never care for a child who drools all the time.						
24. I can't tolerate cleaning up children who have been sick to their stomach or soiled their pants.						
25. I don't mind approaching people with a deformity of limbs and/or the body.						
26. Children who can't talk are just as appealing to me as those who can talk.						
27. Children who are severely delayed or retarded can still relate to people in very basic ways.						
28. One can feel strong affection for the severely impaired individual.						
29. Deep down the people who give care to the severely impaired individual have learned to tolerate them.						
30. I feel you can make the severely impaired understand you care about them.						
31. I really feel education for the severely impaired is very important.						
32. I feel that the severely impaired who can't see, hear, or think well should be helped in any way possible to leave institutional living situations.						

Appendix B

Evaluation Forms - Peer Tutors

Evaluation of Peer Tutor Performance

Peer Tutor: _____ Date: _____

Evaluator: _____ Period Being Evaluated: _____

	Frequently	Occasionally	Seldom
1. Conducts child's objective activities accurately and efficiently.			
2. Uses timely and appropriate reinforcement.			
3. Uses spare time with child constructively.			
4. Shows creativity and initiative in suggesting appropriate alternative activities for child when needed.			
5. Accepts responsibility for child in the day-to-day routine of the program.			
6. Shows patience and initiative in dealing with unexpected problems.			
7. Complies cheerfully with instructions or suggestions given by project staff members.			
8. Collects data accurately and efficiently.			
9. Maintains a positive attitude.			
10. Is easily distracted by events unrelated to child's needs.			
11. Arrives late or leaves early.			
12. Is absent from work.			

TUTOR OBSERVATION

Tutor _____ Date _____

	Yes/No
1. Tutor identifies him/her self to child.	
2. Tutor talks and signs to child at each change of activity.	
3. Tutor uses spare time constructively	
a. in pool	
what activities _____	
b. in locker room	
what activities _____	
4. Tutor alternates pool activities at least every 5 minutes (alternates sitting with moving activities).	
5. Tutor carries out instructional activities accurately and efficiently.	
a. tutor is knowledgeable about procedures	
b. tutor gets child's full attention first	
c. cue is clear and consistent	
d. activity is efficiently paced	
e. consequences occur within 1/2 second of behavior	
f. positive and negative consequences are exaggeratedly different	
g. tutor is sincere and enthusiastic	
h. consequences are appropriate and consistent	
6. Tutor shows creativity in inventing activities for child.	
Example: _____	
7. Tutor speaks warmly to child. Voice is generally soothing and well modulated.	

Yes/No

8. Tutor stops any undesirable or self-stimulatory behavior

   a. stops it immediately and firmly

   b. follows through firmly and consistently

9. Tutor makes eye contact with child if possible and uses appropriate facial expression when talking to him/her.

10. Tutor attends to child during work hours and is not distracted by events unrelated to child's needs.

11. Tutor accepts responsibility for child and other tasks in the daily routine of the program.

   a. is careful to ask someone to look after his/her child while tutor dresses

   b. is on schedule without being reminded

   c. complies with Fircrest and pool/locker room rules

   d. helps clean up locker room - wiping mats, throwing away towels, etc.

12. Tutor shows patience and initiative in dealing with unexpected problems.

13. Tutor maintains a positive attitude.

14. Tutor complies cheerfully with instructions or suggestions given by project staff members.

Appendix C

Instructional Objectives by Child, Years 1-3

Note: For the majority of the objectives the criterion for moving from one step to the next was 4 out of 5 trials for 5 consecutive data days. The final criterion for completion of the objective was 4 out of 5 trials for 15 consecutive data days.

J.A.

1981-82

GM 1 J. will assume and maintain a prone-on-extended arms position for 10 sec. (revised because of broken arm)

GM In supported sitting, will independently lift her head to vertical and will maintain her head up 15 secs or more.

Soc 4.1 J. will maintain eye contact with peer tutor for 4 secs.

Comm. J. will pat tutor's hand.

1982-83

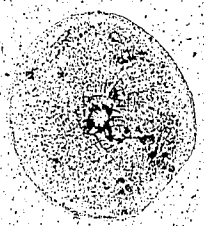
GM J. will independently roll from prone to supine within 15 seconds.

GM (revised) J. will roll from right side lying to supine independently within 20 seconds.

Soc. 1.0 While sitting supported on pool bench facing tutor and given the cue "reach, J.," J. will reach at least 12" toward lollipop held by tutor within 10 sec. of the cue.

Soc. 2.0 J. will look at her tutor's face for 3 seconds, given the cue "Look at me, J."

Comm. J. will explore an object placed in her hand for 5 seconds.



K. B.

1980-81

S1.1 K. will touch one corresponding body part after tutor touches hand to her body part.

S 2.1/C2.1 K. will move her hand to search for an object taken out of her hand and placed in contact with her body.

S 3.1 K. will raise her head to vertical and maintain that position for at least 30 seconds when requested by tutor.

Comm. 1.1 K. will begin the second part of a 2-part sequence (turning and jumping) after the peer tutor molds the first step in the sequence and pauses before the second step.

GM 1.1 K. will stand on right/left foot with minimal outside support (one-handed support) for 3 seconds while in pool.

GM 1.2 Same as 1.1, in gym.

GM 2.1 K. will walk sideways for 3 steps to right and to left.

GM 2.2 Same as 2.1, in gym.

GM 2.3 K. will jump down from pool bench with feet together.

1981-82

S 4.1 K. will touch one corresponding body part after tutor touches hand to take her body part.

Comm. K. will touch tutor to reinstate hair drying.

Comm. 2 K. will express wants or needs through gestures.

GM 4.1 K. will stand on right/left foot independently for 2 seconds following sign and verbal cue.

GM 4.2 With one hand held, K. will step over a 4 inch high object.

GM 3 K. will jump up, clearing floor, with one hand held.

1982-83

GM K. will ascend one step independently (without handrails).

GM K. will jump off bottom step, feet together, 1 hand held.

Soc. 1.0 Given cue "Hit the ball, K.," K. will bat a floating ball back and forth with tutor for 5 exchanges.

Comm. K. will sign "more" when tutor stops swinging her in the pool

Comm. K. will sign "food" after she smells food presented by tutor.

J.C.

1981-82

Social 4.1 J. will maintain eye contact with peer tutor for 5 seconds.

Comm. J. will hold an object placed in contact with his hand for 5 seconds.

Comm. J. will reach for an object, grasp and hold it for 5 seconds.

GM 1.1 J. will sit with tutor support at lower trunk using his right hand to maintain sitting balance (on pool bench/gym bench) for 30 seconds (terminated).

GM J. will [illegible]ently maintain prone propped on elbows and hold his head erect 5 sec[illegible]

1982-83

GM 1 (revised) With assistance for placement, J. will sit independently 5 seconds, with his right arm extended forward as a prop (terminated).

GM J. will independently propel himself 4' using legs and right arm.

Social 1 While sitting supported facing tutor, and given the cue "Hit the ball, J." J. will hit a floating ball back and forth with the tutor for at least 4 exchanges.

Commun. 1 J. will hold an object for 5 seconds without putting it in his mouth.

D. D.

1980-81

S 1.1 D. will give tutor appropriate response/sign to initiate social interaction.

S2.1/C2.1 D. will begin the second part of a two-part sequenced activity (turning around and jumping) after the peer tutor molds the first step in the sequence and pauses before the second step.

GM 1.1 D. will descend/ascend first three steps (alternating) without hand support.

S2.1/C1.1 D. will touch one corresponding body part after tutor touches D.'s hand to his body part.

GM 1.3 D. will jump off bottom step (feet together).

GM 1.4 D. will jump down off pool bench with feet together.

GM 2.1 D. will stand on right/left foot alone momentarily.

1981-82

Soc. 4.1 When placed together on the tube in the water, D. and R. will hold hands with verbal/signed cue for 60 secs.

Comm. D. will sign "jump" in response to verbal and signed cue 'What do you want?'

GM D. will jump down off bench with feet together.

1982-83

Soc. D. will sign "I want tire" in response to tutor asking what he wants, to indicate that he wants to play on the inner tube.

Soc. D. will sign "Ride please" in response to tutor asking "Want ride?", to indicate that he wants a piggy back ride in the pool.

Comm. D. will sign "float" or "jump" when tutor asks and signs "What do you want?"

Comm. D. will sign "Food" in response to the question "What do you want?"

GM D. Will independently step/glide forward on one roller skate, for 6', holding onto wall with one hand.

GM Wearing two roller skates, D. will glide forward a total of 20', holding wall with one hand.

Swim 1 D. will maintain a prone float for 7 seconds on request in 4 feet of water.

Swim 2 D. will perform six front crawl armstrokes on request, while supported by instructor in prone position at pool wall.

Swim 3 D. will independently swim 30 feet in the pool while wearing flotation cuffs at ankles for support.

C. F.

1980-81

S.1 C. will decrease negative/resistant behavior (lying down, collapsing) when requested to move between/in locker room and pool, when request is made.

S.2 C. will raise her head to vertical and maintain that position for at least 30 seconds when requested by tutor.

Comm. 1.1 C. will move her hand to search for an object taken out of her hand and placed in contact with her body.

C 2.1 C. will touch her hair with a hair brush when the brush is placed in her hand.

GM 1.1 C. will demonstrate protective extension on extended arm to the right/left side when tipped in sitting on pool bench.

GM 2.1 C. will stand up in the pool when prompted and maintain standing for 2 seconds.

GM 2.2 C. will walk sideways for three steps to right and to left.

GM 2.3 C. will stand in pool on sign of "Stand up" and will step one step sideways to right and one step to left.

GM 2.4 C. will take 3 steps backwards with physical prompt at hips and sign cue.

R.G.

1980-81

Social 1.1 R. will give the appropriate sign "rub" to the volunteer to indicate interaction for back rub.

Social 3.1 When placed together on the tube in the water, D. and R. will hold hands with verbal/signed cue for 60 secs.

Commun. 1 R. will touch one corresponding body part after tutor touches R's hand to his body part.

GM 1.1 and 1.2 R. will ascend/descend three steps in pool (marking time) without hand support.

GM 1.3 R. will jump down off bottom step (feet together).

GM 1.4 R. will jump in place (feet together) five consecutive times.

GM 1.5 and 1.6 R. will ascend/descend five steps in pool (marking time) without hand support.

GM 1.7 R. will jump down off pool bench with feet together.

GM 2.1 R. will stand on one foot for 2 seconds with one-handed support.

GM 2.2 As above, in gym.

1981-82

Social 4.1 When placed together on the tube in the water, D. and R. will hold hands w/verbal/signed cue for 60 seconds.

Comm. R. will use two signs to express wants or needs.

Comm. R. will respond appropriately to command "wash your body part, R." by identifying and washing his corresponding body part.

GM R. will jump down off bench (pool bench or hallway bench) with feet together.

1982-83

Soc. 1.0 R. will sign "I want tire" in response to tutor asking what he wants, to indicate that he wants to play on the inner tube.

Soc. 2.0 After being towed on the inner tube and given the cue "You same," R. will tow V. on the inner tube for at least 10 seconds.

Comm. R. will sign "I want clothing article on" when asked "What do you want?"

Comm. R. will sign "object name" in response to question "What is the name?"

GM Wearing two skates, R. will independently step/glide forward 30' in 20 seconds, holding wall with one hand.

GM Wearing two roller skates, R. will glide forward with alternating feet, for a total of 6 glides on each foot, holding tutor with one hand.

Swim 1 R. will prone float with kick bar support over pool ledge for 5 seconds on request.

Swim 2 R. will prone float with kick bar support for 5 seconds, mid-pool, on request.

Swim 3 R. will prone float for 5 seconds on request, mid-pool with flotation [illegible] for support.

Swim 4 R. will perform four front crawl armstrokes on request while in a [illegible] position at the pool wall.

C. G.

1981-82

S 4.1 C. will maintain eye contact with peer tutor for 5 secs. (term.)

S 4.2 C. will respond to a noisemaker by reaching for its source.

Commun. C. will pat tutor's hand.

Comm. C. and J. will hold hands for 30 sec., given the cue "Hold hands."

GM 1.1 C. will assume and maintain a prone-on-extended arms position for 10 secs.

1982-83

Soc. 1.0 C. will respond to a noisemaker by reaching for its source.

Soc. 2.0 C. will respond by shaking jingle bells within 5 seconds after his tutor has rung a bell and given the cue "You do it."

Comm. C. will use another person as a means to an end.

Comm. C. will use a sign as a means to an end.

Comm. C. will sign "drink" to get a drink.

GM In prone, C. will independently take one step forward (on hands).

J. H.

1980-81

Social 1.1 J. will hold trainer's hands while walking full length of pool.

S 1.2/Comm. J. will hold an object for 10 seconds when it is placed in his hand by the tutor.

Social 2.1 J. will pull his shirt on when it is placed on his head and cue "Shirt on, J." is given.

C 1.1 J. will move his hand toward tutor when tutor stops stroking J.'s arm.

C. 2.1 J. will clap his hands without assistance after peer tutor begins clapping J.'s hands together.

GM 1.1 J. will maintain prone position on extended arms on pool bench for 10 seconds.

GM 1.2 J. will creep reciprocally for 1/2 pool length.

GM 1.3 J. will creep reciprocally with maximal physical assistance at hands and hips for length of mat.

GM 1.4 J. will transfer from sitting position to quadruped (crawl position)

GM 1.5 J. will maintain quadruped on mat with maximal physical assist (two persons)

GM 1.6 J. will creep the length of the pool (with minimal assist for stability)

GM 2.1 J. will hold onto pool edge.

1981-82

Social J. and C. will hold hands for 30 sec. given the cue "Hold hands!" and a tap on the hand by their peer tutor.

Communication/Social J. will touch and interact with other students (term.)

Social 4.1 J. will pick up and hold an object for 3 sec. on cue.

GM 5.1 J. will pull to stand from a knee-standing position (term.)

GM With physical prompting (intermittent tapping) and supervision, J. will ascend three steps, using handrails for support.

Soc. 1.0 Sitting on pool bench facing tutor, and given the cue "Give me the toy, J.," after tutor places toy in his hand, J. will hand the toy to the tutor within 5 seconds of cue.

Comm. J. will hold an object placed in his hand for 5 seconds.

GM With physical prompting, J. will descend one step, while holding two handrails.

GM (revised) J. will descend one step, holding both handrails, with assistance only at the hips.

G. P.

1981-82

GM 1.1 G. will sit independently on pool bench for 30 sec. using both hands for support. (terminated).

GM With assistance for placement, G. will independently lie prone (on stomach) on third step of pool, weight on extended arms, 10 seconds.

Commun. G. will signal to tutor to continue rocking movement through a body cue.

Social 4.1 G. will take adult's hand and hold it on cue.

Social 5.1 G. will maintain eye contact with peer tutor for 5 seconds.

1982-83 (from 1/11/83 on)

GM In prone, G. will independently lift one arm off the step and place it forward (terminated).

GM While floating on back, G. will push both arms from shoulder level to sides independently.

Soc. Sitting independently on step facing tutor, and given the cue "Hit the ball, G.," G. will hit a floating ball back and forth with the tutor for at least four exchanges.

Comm. G. will hold an object for 5 seconds without dropping it.

M.P.

1980-81

S1.2/C1.2 M. will smile when tutor touches and/or smiles at her.

S2.1/C2.1 M. will not cry when left alone for 15 mins.

GM 1.1 When positioned in vertical in the pool with water at shoulder level, M. will raise head to vertical for 1 sec.

GM 1.2 When straddling peer tutor's knees and facing peer tutor (with peer tutor providing trunk support), M. will raise her head to vertical for 1 sec.

GM 1.3 When positioned symmetrically in prone on wedge, M. will raise her head to at least face vertical for 1 sec.

GM 1.4 M. will raise head in response to hair dryer presented to her hair.

1981-82

S 4.1 M. will maintain eye contact with peer tutor for 5 sec.

GM 4.1 When positioned in vertical (supported sitting facing tutor), will raise head to face vertical for 10 sec.

Comm. M. will increase body movement when tutor talks and touches her.

1982-83

Soc. 1.0 M. will respond to a sound by turning toward its source.

Comm. M. will signal tutor by touching that she wants an activity continued.

Comm. 2 M. will increase vocalizations (terminated).

Comm. 3 M. will make exploratory movements with her hands when placed in contact with an object.

GM While positioned prone over an inner tube, M. will lift her head independently 10 seconds.

A. S.

1980-81

Soc. 1.1 A. will not cry when placed in her chair if left alone for 5 minutes.

C2.1, S2.1 A. will keep her eyes open when peer tutor talks to her and touches her for 5 consec. minutes.

C1.2 A. will smile when peer tutor touches her and or smiles at her.

GM/Soc. When sidelying on right side, A. will bring sucker to her mouth using her right hand.

GM1.1 When positioned in vertical in the pool with water at shoulder level, A. will maintain head rotated 45° to right for 5 seconds.

GM 2.1 When positioned in vertical or supported sitting, A. will raise head to vertical momentarily (1 sec.)

GM 2.3 When positioned in prone over large wedge, A. will initiate motion to raise head by tightening muscles in back of neck within 5 seconds of completed command.

GM 2.4 When positioned in vertical in pool, A. will raise head to vertical for 10 seconds.

GM 2.5 When placed in prone, A. will raise her head in response to hair dryer being presented to her hair.

1981-82

S 4.1 A. will maintain eye contact with peer tutor for 5 seconds.

Comm. A. will track a bright object across her field of vision.

GM When positioned in vertical (supported sitting facing tutor), will raise head to face vertical for 10 seconds.

1982-83

Soc. 1.0 Given the cue, "Look at the porcupine, A.," A. will discriminate between two toys presented 12" from her eyes and will look at the porcupine within 3 seconds.

Comm. A. will look at tutor when tutor is talking with her.

GM In supported sitting, when support is removed from her head, A. will independently hold her head erect 3 seconds.

V.S.

1982-83

Social 1.0 Given the cue "Throw the ball, V." and having ball passed to her by tutor, V. will throw the ball back to her tutor five times within 1-1/2 minutes of the initial cue (tutor paces the game).

Social 2.0 After being towed on the inner tube and given the cue "You same," V. will tow R. on the inner tube for at least 10 seconds.

Comm. V. will sign "play" after tutor signs that work is finished.

Comm. V. will sign "I want clothing article on" when asked "What do you want?"

Swim V. will perform five breast stroke armstrokes on request while seated on the pool stairs.

L.W.

1980-81

C1.1 L. will lift her arms to put on her shirt when tapped under the arms by peer tutor.

C2.1 L. will clap her hands together without assistance after peer tutor begins clapping L.'s hands together.

S2.1/C2.2 L. will hold an object for 10 seconds when it is placed in her hand by the tutor.

S3.1/C3.1 After tutor rubs L.'s back, L. will touch tutor's shoulder with her right hand.

GM 1.1 When sitting on pool bench with trunk support, L. will lift head to vertical (in midline) for 5 seconds.

GM 1.2 As above, in gym.

GM 2.1 Following placement of extended arm for support, L. will maintain hand contact on bench for 5 seconds.

GM 2.2 When sitting cross-legged on mat with trunk support, L. will maintain hand contact on mat for 5 consecutive seconds.

GM 2.3 L. will sit independently on pool bench without hand support for 30 seconds.

GM 2.4 L. will sit independently on mat for 30 seconds.

GM 2.5 L. will maintain independent sitting with bilateral hand contact on mat for 30 seconds.

GM 3.2 L. will maintain prone on elbows with head up on mat with physical assistance for 15 seconds.

GM 4.1 L. will maintain a knee-standing position while holding on to side for 15 seconds.

GM 4.2 L. will maintain a half-kneeling position (weight on right foot), while holding onto side for 15 seconds.

1981-82

Comm. L. will signal to tutor to continue rocking movement through a body cue.

Social 4.1 L. will take adult's hand and hold it on cue.

Social 5.1 L. will hold ring appropriately for 30 sec. when the ring is placed in her hand and the cue "Hold the ring, L.!" is given.

GM 4.1 L. will "cruise" three steps to left and to right with minimal assist supported knee-standing at pool or stage edge (terminated).

GM (revised) With assistance for placement, L. will knee stand (see position) and take one step to the side independently.

GM (revised) With assistance for placement, L. will independently knee stand 5 seconds with hands resting on a support.

Appendix D

Parent Needs Assessment

PARENT NEEDS ASSESSMENT

Our project has had extensive involvement with your child at Fircrest. In the course of the project we have learned some things about your child that may be of interest to you. This questionnaire is one way of finding out if we might have information you might want. We realize that questionnaires are time consuming and frequently ask questions that require a lot of thought, making them difficult to fill out. We want to thank you in advance for your interest, thought and time.

Please fill out this questionnaire completely. Answer every question. If you are not sure, don't know, or would rather not answer a question, please state that rather than leave a question blank. We are more interested in your honest feelings than a "right" or "wrong" answer.

Section 1: Your Child.

1. Who first informed you of your child's handicaps? _____

2. Did you feel the information given at that time was adequate?

   Yes ____ No ____ Why? _____

3. Do you now have questions about your child's - (Answer yes or no).

   ____ 1. Physical development (movement, positioning, contractures)?

   If so, what? _____

   ____ 2. Mental development (thinking, developmental level)?

   If so, what? _____

   ____ 3. Language development (child's way of talking, signs used)?

   If so, what? _____

____ 4. Social development (awareness of others, responsiveness)?

If so, what? _____

_____

_____

____ 5. Behavior (self-abuse, the way your child relates to you, what your child does)?

If so, what? _____

_____

_____

4. When you have questions about your child, like those listed above, who do you ask for answers? (Give name and person's relationship to you.) _____

_____

_____

5. Are the persons you ask -

A. Family members.

B. Friends.

C. Professionals outside of Fircrest.

D. Professionals at Fircrest.

E. Other. Explain _____

6. Are you usually satisfied with the information you get from this/these person(s)? ____ Yes ____ No _____

_____

7. Would you like more information on your child from this project?

____ Yes ____ No. If so, what? _____

_____

Section II. Visiting with Your Child

8. Who, in your family, besides yourself visited with your child last year? (Give number of times, if known) _____

_____

9. When you visit your child, where do you visit with him/her?

____ In the living unit.

____ In a separate room.

____ At the cafeteria/coffee shop.

____ On the Fircrest grounds.

____ Off the Fircrest grounds.

____ In your home.

____ Other (Please explain). _____

10. When you are with your child, what do you usually do together?

1. _____

2. _____

3. _____

11. Many parents who visit their child in a residential facility report feeling frightened about going to visit their child. Does this describe your feelings? ____ Yes ____ No.

12. Often while parents are with their child, they feel like they don't know how to behave towards their child. Does this describe your feelings? ____ Yes ____ No.

13. After being with your child for a while, how do you feel? _____

_____

_____

Section III: Resources.

14. Do you belong to any kind of parent group - like Friends of Fircrest, Association for Retarded Citizens, Parents of the Deaf-Blind?

____ Yes ____ No. If yes, please list. If no, would you like to belong? _____

_____

15. Do you attend any meetings with Fircrest staff? ____ Yes ____ NO. If yes, who do you meet with and how often? If no, would you like to meet? _____

_____

16. Are there other people (friends, other parents, relatives) you meet with regularly with whom you can talk about your child?
_____ Yes _____ No. If yes, who? How often do you meet? If no, would you like to discuss meeting people you could talk with?

_____

_____

_____

Section IV: Project Options

17. Would you be interested in one of the following options as a part of our project?
    1. A meeting with the project coordinator.
    2. Meeting with individual staff members about your child.
    3. Meeting with specific members of Fircrest staff involved with this project.
    4. Being sent written progress reports on your child.
    5. Meet with other parents.
    6. None of the above. (Please comment)_____

_____

18. If you would like to meet with persons involved with your child, how often?

_____ Once a month.

_____ One time at the beginning of the project/one time at the end.

_____ No meetings at all.

_____ Other. Please comment._____

_____

19. Any comments, questions or concerns? Please list them here.

_____

_____

_____

Thank you for your cooperation and time.

Appendix E

Parent Feedback Form, End of Project

DEAF-BLIND SWIM PROGRAM

Questionnaire for Parents

1. How you feel about your child's experiences in the swim program.

A. Do you feel the swim program benefited your child? Yes ___ No ___

1. If yes, what aspects of the program do you feel were most important? (Please rank order the top three and check the others you think helped.).

relaxation in warm water _____

long-term relationship with a young person _____

exercise _____

daily instruction on objectives _____

interaction with other handicapped children _____

change of scene (leaving the hall) _____

extra attention _____

other (please specify) _____

2. What were the main benefits to your child? (please rank order)

physical _____

emotional _____

social _____

language _____

all _____

3. What were the main benefits to you?

peace of mind _____

knowing the child was having contact with non-handicapped peer _____

knowing the child was getting 1:1 attention _____

knowing the child was receiving extra instruction _____

other (please specify) _____

4. What differences did you see in your child when the program was not operating (for example, during vacations)?

_____

_____

_____

5. Did you notice any changes in the attitudes of the hall staff toward your child, as a result of the swim program?
Yes ___ No ___

If yes, what _____

6. Do you think that a recreational swim program (just having the child in the pool with an attendant) would have been as beneficial as a program such as ours with instructional objectives?
Yes ___ No ___

7. Do you think the program would have been just as effective if run by available Fircrest staff, without bringing in young peer tutors from the community?
Yes ___ No ___

II. What needs do you see for you and your child for the future? (Please be specific).

1. Physical needs _____

_____

_____

2. Recreational needs _____

_____

_____

3. Social/relationship needs _____

_____

_____

4. Emotional needs _____

_____

_____

5. Living arrangements _____

6. Medical needs _____

7. Equipment needs _____

Appendix F

Tutor Comments on Their Experience

Question: What about the term "handicap?" I think this is a good question. Does it have a different meaning to you than it did before?

It seemed like before when I would think of handicap I would think of hopeless, you know, like there wasn't really anything you could do about it. That's changed a lot.

When I thought of handicapped I used to think of something really foreign or something not involving me very much. It could never happen or it could never be anything with me or any of my friends, but like E. said when you think about it, people you know or even yourself are handicapped in one way or another.

Question: When you see handicapped individuals in the community, do you have a different reaction to them?

I definitely do. We have some handicapped people at our school who are in wheelchairs and I was always afraid of them. I was mostly afraid I think because I didn't know what to do. And now I find that I haven't got the fear that I had before. And I don't go out of my way -- now that I'm not afraid -- I don't go up to them all the time and want to talk to them, but I treat them like I would anybody else.

When talking about first impressions, not too many of you know the student I worked with last year, but last year I was really afraid of my student because she was so aggressive and I tended to pull back a little bit when I saw that. I was afraid I was going to get mad at her for not wanting to work. And I felt bad because I was getting mad. And I realized that that's okay for me to get mad -- because she's the one who's doing wrong. It wasn't because she didn't know better -- she did know better, she was very smart. I found out that it was okay to get a little mad and let her know that. She ended up doing better later on.

Question: If there's just one thing that you've found out of this project that's helped you to relate to someone who's different, is there one thing you could think of that has made it easier to approach other people?

Overcoming a fear.

It's not really a fear of what they're going to do to you, but it's kind of scary because you don't know what to do. You don't know how to treat them. I'm afraid that what I'm going to say is going to be wrong and that I'm going to make them feel awkward. And that's hard to get used to - treating them like someone who is normal - or what we think of as normal anyway.

With the handicapped, it's so easy to either undertreat them or overtreat them. Like going up to a deaf person and talking louder. Or you might be extra careful with people. Or you might be extra careful with people with defects. If you treat them naturally, I think they'd like it a lot better.

Just getting used to the whole situation. It took a couple of weeks to get used to the idea where we are the minority. Most everyone here is handicapped in some way or another. That seems weird to me being the minority somewhere.

Question: What about career plans? Is there anyone here who thought you'd want to work with handicapped people when you first started?

I guess I've always wanted to, but now a lot more. I'd like to teach them a lot more.

I wasn't planning on working with them, but maybe as a physical therapist, working with handicapped.

The program has made me change my mind two or three times. When I first came in I was only doing it because I was looking for a job. And once I got into it, I decided definitely I wanted to work with handicapped people.

Not any career changes, but that's how I decided to go into special education is just from working here. Because I was interested in it when I first started, but this confirmed my decision.

Question: What do you think you've learned then out of this, in terms of this job?

Different ways to accept people.

Discipline.

Question: Discipline? For you, for your child?

For both. Yes and no. That's right and that's wrong. And to come every day because that's important.

Question: ...So they're not just a handicapped person, they're a handicapped individual who you know?

A friend. Yes. In fact, they help me sometimes. Sometimes I'll be feeling bad, and I'll come and see Bob doing something good and it cheers up my day.

Question: What do you tell other people about this job? Do you tell them they should take it or ...?

I always told people though when there were openings that to come and see, and that they have to be really dedicated, too, because this is like a class for them and if we're not there, then they don't come and they're not learning. So I made sure they're going to be dedicated, too.

Yea, it's not just us that you have to think about when you don't come to work or something.

It's affecting somebody else.

Question: What do you think about the ages that these kids really are, the ages that they are chronologically?

I don't ever think about the age. I respond to them as their mental level is. I know each child and basically how they can respond and what kinds of things they can perceive, so I go to them that same way.

Question: Any other comments? What do you do when your expectations are maybe too high? Some days you come in and you feel disappointed because you're not seeing progress very fast. Or some of these children instead of progressing have gone backwards, if they've been sick for a period of time. How does that make you feel?

I think you hit the wall, and then you go back and think "I've got to do something about this." You've got to get them back to where they were before. Usually they go back a lot faster, they kind of remember a little bit of what they were doing before. But you have to remind them.

I always keep on trying to push, because I know what Tom can do. I've seen him do things, then sometimes he won't do them. So I just tell him, "Hey, I know you can do it." Keep on pushing; when he does, I jump up and down and yell and scream.

Also, I think our moods affect them. If we come in and we're in a real bad mood, you know, I think they can feel it, and they know. Just like if I'm in a bad mood and they're happy, then that makes me happy. It washes away all the bad, for the time being anyway.

If you get bored, it's not the child's fault. You can think of something else to do with them. It's not like a dead end. You can always think of something else and work with them in different ways.

Year 3

Value of the swim program:

A.-- "I think if they didn't have this program, these kids would miss out on so much...it's only an hour a day, sure, but you see all these things that they take back to their halls. You tell their hall that they do this now, and the hall says hey--well then I'll make him start doing it here. I've noticed with R. with his showering--they make him soap up and dry off now and they really make him work. It seems to me we're doing stuff that can be used. It's not like well, throw me the ball or something like that. It's more like something they can use in everyday life. I guess you could say this kind of helped R. get closer to his out of institut(ion) life-- eventually they want to get him out into an apartment or something like that. I think it really helps--helps him deal with different kinds of people and all the attention he gets too really helps, helps him deal with people a little better.

H.-- It gives the public an opportunity to experience what they're like and notice that they're really people, they're not just freaks or something like that.

E.-- One thing that I've discovered is they do each have an individual personality that needs to be developed. Through this program a lot of them have been developing their personality but it needs to be developed more.

I've seen progress in all the kids because I've worked with almost all of them.

C.-- If they'd go up to the halls and watch everybody just sitting around in the halls sleeping and stuff. As soon as you see (G.) come out and he gets in the sun--he immediately starts smiling and perks up. I think that's real helpful, and they're progressing to become a little more self-sufficient than they would be if they just sat up there on the halls.

J.-- Not only do the objectives help the kids learn a lot of stuff, but I think most of them are generally happier. I can see the difference from the beginning of the year, after they'd gone all summer without a whole lot to do, to--now M. and J. and a lot of the kids are quicker to smile. They're happier, more alert...I just really started to develop a real relationship with (J.), where she knows who I am when I come in and she's happy, she starts smiling when I take her some place, and I think that's important. Sometimes I think these kids have it hard enough as it is, and all we really do is open up their world a little bit and make it better and bigger...I think it's real important what we do.

P.-- When people ask me what I do, and I tell them where I work, they kind of say "Oh," --I mean they don't know what I'm talking about. They don't have any perception of what it's like to work with these kids. And the whole idea behind this project is to get people to know about what it's like, what these kids are like...

A.-- To me it seems a heck of a lot better to come swimming and learning something and doing something creative and maybe learning something than sitting home in their hall self-stimming.

Tutors' comments relating to project goals and continuation:

T.-- I think they need more money into the project so that more people can get involved. We can have more students, because it's worthwhile with 1 on 1 in the swimming pool. I can see the progress over the years.

A.-- Please keep it going! It's really worthwhile. They're not wasting their money. We're not here just for the money. We're here because we love it.

M.-- It's been real worthwhile, both to the people working here and to the kids. I know with V.--when I go to the hall to pick her up--she's on her feet and ready to go in just no time. She's always really excited to go swimming and to get in the water. It's been really good for her. I know she's learned a lot and she's made a lot of progress. I think it's really worthwhile that projects like this are funded.

C.-- What I'd like to say to the funders: I wish they were handed a list of data in outline form that would show all the progress that each child has made from the beginning to the end. And I think that if they saw that they'd be really amazed--I think the funding would be a lot easier to get.

E.-- This program really helps, and I think it should be funded as long as it's possible. ...A lot of people ask me, "Why would you want to work eight hours a week, minimum wage?" And I tell them, this job... It's worth it to me because I've seen progress in all the kids because I've worked with almost all of them. And it's just really worth it.

H.-- I think that it should be funded as long as possible, because the kids really grow and it helps them to be mainstreamed more into society. And the ones who won't be mainstreamed, it's good for them too because it helps them develop their muscle tone, and helps the ones who are really restricted, it gives them an opportunity to exercise their muscles more... They really progress. If it stops, they just go back to where they were and...it's no good.

T.-- I thought the money was very well spent. My child personally I thought progressed 100%, from not being able to float last year to almost swimming by himself this year. I think that is quite an improvement. ...I think maybe the people upstairs in Washington should come down and try to work with kids and they'd see how it is, and see how fulfilling it really is. But it'll never happen.

J.-- I think the money was real well spent too. ...I think it's real important what we do. Of course I'm kind of biased, but I hope the project is continued somehow, because I can see a lot of growth in all the kids.

Also, I was thinking of telling the funders--if they could just look at all the stuff we learned, as kids in America--when they want other kids to learn to use their energy constructively...since parents like to think that way.

P.-- I'd like to say to the people who fund this project that the original idea behind this was to have people outside--non-professional people--come in

to work with the kids so the public is more open to these kids. If we stop the project now, it's not going to do it. I think we need more money to hire more tutors because we need more people to see what this is like. It's not going to do it by word of mouth.

A.-- It seems like it's a good way to get them out and into the public. And I noticed these guys from the prison come in and they'll sit down and watch us, and they won't stay very long, because they can't--but it's neat that they're interested in what we're doing and come to watch. And the little kids--it gives them access to this type of idea. I think it's the whole public awareness type of deal. We go out and tell people things that happen at work and they look at us kind of funny. Then they realize that there (are) fun parts to this. It's not all hard work and 'tolerating' and stuff like this, and all the bad times. It's really fun.

When you meet a handicapped person out there in the big bad world...I can say "Hey, I can identify with you. Because I work with people who may not be as bad as you, but they have disabilities too, and they're all people and all have their personalities."

I noticed last year--one girl who worked up on L.'s hall, that I used to stop and talk to every day--I saw her on the street with her parents one day--she saw me and started laughing and smiling. And her parents really loved it. I explained that I see her every day and stuff. But you see a handicapped person now--you smile now...

With this program, you get to explain to more people that handicapped are really human, and when they see a handicapped person, maybe they'll remember what you said, and it will click, and they'll say "They're people too."

Appendix G

Teachers' Comments About Project Children

Teachers' Comments About Project Children

Question 1. What changes in the children did you see over time that you feel were due to the swim program?

Answers:

Teacher A

Increased level of socialization; children were more aware of adults, peers; increased smiling, eye contact.

Greater generalization of behaviors across adults/peers by working on similar skills in different settings with different program managers.

Teacher B

(1) Generalization. The ability of the students to work more easily with a variety of staff members and to generalize some of their learned behaviors in a variety of settings. These include:

(a) Gross motor movement: this is particularly evident in R., D., and K. in their improved orientation in space and increasing independent mobility. Their body awareness has definitely increased.

(b) Fine motor movement: signing skills have increased --, particularly in the physical formulation of signs and their ability to use pincer grasp skills more successfully in a variety of programs. All use their less dominant hand more as a locating device.

(c) Self-help skills: all three students are toileting themslves independently with help only in locating the bathroom and in the hand-washing skills. There are no more toileting "accidents." R. is beginning to button independently and K. and D. are both taking their pants up and down and place their shoes and socks on or take them off independently (minus help with shoestrings).

(2) Socialization areas.

(a) Appropriate behavior: All three students' behavior has improved. D.'s self-abuse and aggression toward others are rare. He has developed a "waiting" behavior prior to working and all students have increased their ability to attend to table tasks for longer periods. R.'s tantrums are almost non-existent. K.'s passivity has been replaced by some stubbornness and infrequent tantrums. I regard them as positive changes since they are easier to redirect than refusing to respond at all. And though it is very subjective, all three students are generally happier and more inquisitive.

(b) Interaction with others and objects. D. will interact physically for longer periods without constant head-rubbing reinforcement. Both he and K. will now touch briefly, explore peers seated next to them and their parallel play with staff has increased. All three exhibit greater sensitivity to textures without being tactilely defensive, and all are more inquisitive: more exploration with their hands and of their classroom (by walking around).

Teacher C.

J. is adapting to changes in his environment better than in the past. This may be in part due to the swim program as a new activity for him and becoming acquainted with peer tutors who change periodically. J.'s gross motor skills improved last year. Her head control has improved and her ability to maintain forearm support has emerged and improved. J. is visually and auditorally attending to a speaker with greater frequency and for a longer period of time. She is also responding vocally in a one-to-one situation.

Question 2. When you saw the children in the water, did they behave differently than on land? If so, how?

Answers:

Teacher A.

For those who enjoyed a water environment, more initiation of actions; e.g., splashing, blowing bubbles, etc. Also, some differences in motor behaviors (e.g., walking, kicking feet) in a water environment.

Teacher B.

All the students exhibit greater physical freedom in the water than they do on land. They appear to have greater confidence in their bodies in the water. D.'s independent swimming in the deep water is amazing! All three seem to relax much more quickly in the water than they do during various leisure activities on land.

They all exhibit a clearer comprehension of cause and effect in the water than they do on land: certain body movements (e.g., kicking, head in water, arm movements, etc.) elicit certain results (propulsion through the water, splashing, floating, etc.). I see more generalization of this realization in R. in the classroom than in D. and K., but I see it clearly in all of them in the water.

Teacher C.

A. was so very relaxed in the water! It was wonderful to decrease her extremely high muscle tone, which was a contribution to her severe deformities. Besides the benefits to her physical development, she obviously enjoyed the water and these kids need more leisure activities that they truly enjoy. I think J. and M. respond vocally more in the pool than out of it. Vocal responses are important skills for this group. If these kids make pleasant noises they will get much more attention from the caregivers and this can mean an important change in their life in an institution.

Question 3. Any other comments, obervations?

Answers:

Teacher A.

I felt the project was very benefical to students and peer tutors. Hope it can be continued and perhaps expanded to other populations.

Teacher B.

All three of my students are aware of and enjoy the presence of their peer tutors: there is familiarity and trust. These interpersonal relationships over time have certainly provided them with a variety of positives: friendship, generalization, joy, trust, fun, and learning. The benefits of positive human interaction is too often a rarity in their lives and the Monday-Thursday sessions have been unique and anticipated by them. On the infrequent days that the swim program has been cancelled and we have signed so to R. prior to leaving, he has gotten "on his mad" and flicked his ear and arched his back. It is an understood loss then and I am sure it will be unless the program is somehow continued.

I feel strongly that this project was one of the most positive and stimulating experiences in the lives of the Fircrest students over the past 3 years. My association with the project has been very personally and professionally enriching as well, and I am grateful to all of you for the energy you put into communication and team effort with me as a classroom teacher. My observations are predicated on the belief that these areas of growth are the results of our combined classroom and project efforts. It is obvious that the students have made some remarkable gains during the 3 years and that is the ultimate goal of all our efforts. Our programs have supported one another and the benefits are seen in the students.

Appendix H

Correspondence Concerning Final Disposition

of Inservice Training Modules

LINC RESOURCES INC.

1875 Morse Road
Suite 225
Columbus, Ohio 43229
(614) 263-LINC

September 27, 1983

Ms. Connie Pious
Information Specialist
University of Washington
Seattle, Washington 98195

Dear Connie:

The letter from LINC confirming the fact that the National Clearinghouse of Rehabilitation Training Materials in Oklahoma will be the distributor for your product, Integrated Educational/ Leisure Time Model for Deaf-Blind, has not been sent to you because the actual dissemination agreement has not been signed. However, that is just a matter of paperwork and the time the mail takes.

Therefore, I am sending you a copy of the proposal form submitted by Oklahoma for your product so you will have the information necessary for your final report. You have our assurance that the dissemination agreement will be signed, and a copy will be sent to you at that time.

I hope the enclosed form contains the information needed for your final report. If you have any questions, please call.

Sincerely,

Carol Daniels

Carol B. Daniels
Marketing Specialist

CBD:mcm

Enclosure

Market Linkage Project for Special Education
Funded by U.S. Department of Education, Office of Special Education
Contract 300800963

PROPOSAL FORM

Company/Organization National Clearing House of Rehabilitation Training Materials

Address 115 Old USDA Building, Oklahoma State University, Stillwater, OK 74078

Title of Product Integrated Educational/Leisure Time Model for Deaf-Blind Children and Youth (Inservice Training Package), Product No. 83.1.89

I. EDITORIAL

A. Describe the proposed format of the final product - indicate any modifications you intend to make

The product will be disseminated in three volumes. The Inservice Training Package will be bound in a looseleaf notebook to facilitate ease of use. The Operations Manual and the Supplementary Materials will be bound with combback bindings. The layout will remain the same.

B. Content - indicate proposed editorial changes or content modifications

No editorial changes are planned.

C. Publication date - estimate when product will be available to consumers

October 1983

II. MARKETING AND DISTRIBUTION

A. Potential buyers - indicate audience(s) you intend to reach

University instructors, professors of preservice teachers; trainers of peer tutors; staff development specialists seeking to develop support systems among community personnel (including secondary and college students)

B. Advertising and promotion plans - (e.g. direct mail, fliers, catalogs, ads in journals, exhibits at conventions--include dates and/or quantities)

Special Education Catalog August 1983
Special Education Memo November 1983
Flier to selected names from the Special Education mailing list January 1984

This form may be used only when submitting proposals to LINC for products announced in a Noncompetitive Product Alert or a Special Announcement.

C. Sales and distribution plans - specify how product will be made affordable--i.e., time purchase, lease, rent, sale only, available by component or by set, etc.; how product will be made accessible--i.e., preview, option to purchase, on approval, etc.; and through whom product will be distributed--i.e., direct from company, sales persons, representatives, dealers, subcontractors, etc.

The manuals will be sold by the National Clearing House.

III. FINANCIAL

A. Cost and pricing information--include unit cost and cost of components, consumables, etc. if applicable

The prices reflect the cost to print the contents of the books and to place the Inservice Training Package materials in a plastic three-ring binder (notebook). The printing of 300 pages is $9.00, and the binder will cost approximately $4.00, a total of $13.00 per unit.

B. Estimated dollars to be invested to market the product (production, inventory, marketing - excluding personnel costs)

Twenty (20) sets of the package will constitute the initial inventory, an investment of $260.00.

C. Estimated sales volume.

	Min. Units	Max. Units	Min. Units	Max. Units
Year 1	20	100		
Year 2	20	50		

D. Proposed royalty schedule. Payments made to LINC are distributed to the federal government and/or to the developing institution depending upon regulations applicable to specific grants or contracts.

The Grants Division of Oklahoma State University does not permit the payment of royalties for materials disseminated by campus agencies.

NOTE: Please enclose any additional information or special considerations relevant to your organization's commitment to this product. Representative brochures and catalogs should be included.

Prepared By Jean A. Hudder Title Information Coordinator

Date August 24, 1983

Appendix I

Final Summary Report From the

External Evaluator, Dr. Barbara Sirvis

FINAL SUMMARY REPORT:

"Integrated Educational/Leisure Time Model for Deaf-Blind Children and Youth"

Barbara Sirvis, Ed.D.
Project Evaluator

INTRODUCTION

This report represents the results of the final evaluation site visit to the University of Washington Department of Special Education project "Integrated Educational/Leisure Time Model for Deaf-Blind Children and Youth." The fourth and final site visit by the project evaluator was conducted on August 15-17, 1983. The purpose was overall evaluation of the project including participant gain and products and materials development. As in previous site visits, evaluation data were obtained through individual and group meetings with project staff as well as review of participant performance data and the materials developed for dissemination.

Unlike previous interim reports, this report will be summative in nature and focus on the primary development and implementation areas formulated during the project. Conclusions and recommendations for dissemination strategies will be presented.

PURPOSE AND GOALS

Although mentioned in previous evaluation reports, it seems important to mention again the significance of this project in its transdisciplinary approach to participant intervention as well as staff development. The utilization of recreation and leisure activities to facilitate skill acquisition in the areas of gross motor, communication, and social interaction continues to be unique to this project. Although numerous projects have focused on the development of specific recreation activities OR the development of specific skills in the areas noted, other model projects do not attempt to integrate the two areas.

Rarely, if ever, do special education personnel even begin to understand the philosophical implications of recreation and leisure for severely handicapped populations. In this model project, a beginning has been established. As a dually trained professonal in both special education and therapeutic recreation, the project evaluator continues to be impressed with this unique and appropriate approach to the development of participant skills. Clearly, there is still considerable need for staff development of an understanding of the nature of the leisure experience. However, this project represents a substantial beginning.

In addition to the recognition of the importance of recreation/leisure, this project is built on a philosophical foundation which recognizes the importance of cooperative efforts between the University and the community-based agency and practitioners. Thus, the cooperation of Fircrest and the willingness of the University to create a demonstration project which enhances the institution's program are both commendable. The transdisciplinary approach, integrating the skills and knowledge of all project staff, continues to be exemplary and should be a critical factor if replication is considered. Although many professionals consider themselves competent to provide the skills of their colleagues in other disciplines, the unique goals and structure of this program will be lost if the transdisciplinary concept is not continued. Accurate implementation or replication of this integrative project requires the skills, knowledge, and cooperative interaction of several disciplines.

ASSESSMENT

A primary objective of this project involved the identification and/or, if necessary, development of assessment tools appropriate for use with a deaf-blind/multiply handicapped population. Efforts were made in all three areas—gross motor, communication, and social interaction. In gross motor, the combination of two existing scales was found to be appropriate for assessment of

skill and development. However, in both communication and social interaction, existing assessment tools were not considered sufficient or appropriate to assess the minute gains characteristic of this population. The communication disorders specialist on the project staff developed an adaptation of the multidimensional scoring concept and applied it to the GATE (Gestural Approach to Thought and Expression); this seems to have been successful. The principal investigator with the assistance of the project coordinator has developed a social interaction scale which has excellent potential for use with this population. Although not developed until the third year of the project, the initial data analysis indicates a potentially significantly reliable and valid instrument. Data analysis was not complete at the time of the site visit; initial results are favorable.

In general, staff indicated that assessment was an area where the trans-disciplinary concept was very important. Professionals were able to learn from each other during the assessment process. If and when replication is considered, it might be helpful for team members to assess in relative proximity, facilitating increased communication.

DISSEMINATION: PUBLICATIONS AND PRESENTATIONS

The project staff have been prolific in their publication of information about the project, assessment development, and analysis of intervention strategies and related participant performance and growth. Publications have appeared in diverse publications representing all of the disciplines of the project staff. Published articles as well as those in progress will be noted in the final report of the project. The project staff is commended for this dissemination effort.

The project staff have also been active in presentation of the project at numerous professional conferences and workshops. This dissemination effort is

also commendable as well as indicative of the staff's dedication to the project's philosophy and goals.

DISSEMINATION: - PRINTED PROJECT MATERIALS

Of major importance in this project has been the continuous collection of instructional impact data and related refinement of the inservice training materials. The resultant product is exemplary and represents a careful consolidation of staff effort. The consistency of quality and depth of materials presented is exceptional. Each module includes an outline, full description of content, handouts, pre/post-tests, and bibliographic information. Note is also made of the suggested professional discipline which is preferential for presentation of each module.

At this point, the greatest difficulty with the modules is the identification of a publisher for final dissemination. Clearly, LINC services has been less than adequate or helpful in the identification of an appropriate source. Although materials for special education for severely/profoundly/multiply handicapped individuals create a relatively small market, there are publishers who are interested in such materials.

REPLICATION

Although the principal investigator has been in communication with personnel in SEP/ED who indicated a willingness to consider offering the project for replication or a one-year extension for creation of replication options, no response has been received to the communication. (See attached letter.)

This project has aspects which should be considered for replication. Although assessment tools have not always been able to detect significant changes, data indicate a small trend which needs to be explored further, especially since some of the assessment tools were not identified/modified until

well into the project. In addition, the impact of the experience on the peer tutors is clearly significant. Definitive information about replication options should be communicated.

If replication is considered, several options could be explored. Each is less costly than the current project; reduction of expenditures is based on utilization of the materials developed during the current project. The following are some possible programmatic structure options:

a.) Use a transdisciplinary personnel from an existing agency program. Hire one half-time professional to coordinate the project. Hire peer tutors (one/participant). Costs would include the coordinator ($7500/year + benefits) and the peer tutor salaries (4 days/week for 33 weeks = $684.40/tutor/33 week year). Additional costs might include a social work student as facilitator of the social interaction training of peer tutors (25% time = $3600) and consultants to assist in the inservice training ($150/session).

b.) Use transdisciplinary personnel from existing agency program. Assign one staff member to coordinate the program as part of his/ her professional responsibilities. Hire peer tutors (one/participant). Costs would include peer tutor salaries. Optional suggested costs would include a social work student and inservice training consultants.

c.) Use transdisciplinary personnel from existing agency. Hire one professional half-time to coordinate volunteer peer tutors. Costs would include the salary for the coordinator ($7500/year + benefits). Optional costs might include a social work student.

d.) Use transdisciplinary personnel from an existing agency program. Use volunteer help as tutors, trying to solicit as many age-appropriate volunteers as possible. Essential expenditures would be only for program-related training materials and supplies.

e.) School district coordination of the program, using transdisciplinary personnel from the school district as well as existing community-based human service agencies. Use high school students, including possibly mildly handicapped students in special education, as peer tutors. (NB: There are some difficulties with the use of mildly handicapped students as tutors, primarily in the area of impact of the inservice training program and its related effect on the quality of program structure. However, this is an option that might be considered if school district personnel were willing to take the time to adapt the instructional modules for the unique learning styles of the students chosen as peer tutors.) Costs would be primarily for training materials and program-related supplies.

When considering options, it is important to examine them in light of several other staff- and program-related concerns:

1. Recognition of and appreciation for the integrative nature of the skill development process is vital to any replication effort. If focus is placed on only one skill OR only on the development of a swimming program, the very essence of this project will be lost.

2. The importance of the transdisciplinary team has already been noted. When considering programmatic options, the roles, responsibilities, and abilities of all staff need to be considered. Professional preparation in and mastery of their respective disciplines is essential. Ideally, professionals should also have knowledge about and understanding of the unique needs of individuals with severely handicapping conditions including deaf-blindness; however, of greatest importance is professional discipline competence and a willingness to participate in the learning and facilitating process of the transdisciplinary approach. It should not be assumed that any one individual can meet all of the programmatic, training, and intervention needs in a replication project.

3. The skills of project staff can be facilitated by an appropriately trained coordinator. It would seem that an individual trained in special education for the severely/multiply handicapped including deaf-blind would be most appropriate as coordinator. This has to do with the nature of the training received as well as the need for a coordinator who has an understanding of the learning process, both of the participants and the peer tutors. This recommendation is not hard and fast; clearly, personnel from other disciplines may have the appropriate skills to serve as coordinator. The person chosen for this role is critical to the success of the project. Thus, it is most important that the selection be made carefully, taking into consideration the multidimensional nature of the coordinator's role.

4. In the preceding programmatic structure recommendations, reference is made to the potential employment of a social work graduate student. The role of the social worker should be recognized for its vital impact on the interaction among and success of the peer tutors. Group sessions with the social worker during this project provided an open arena for communication among peer tutors; the social worker served as a facilitator for what has been called "the safety valve group." Other team staff could be available as needed on a consultation basis for participation/instruction during these sessions.

5. If replication is considered, it is recommended that the sponsoring agency employ appropriate professionals to provide inservice training and to serve as occasional programmatic consultants. Specially trained, experienced professionals from the disciplines suggested can enhance the impact of the project; if hired on a consultant basis, the cost if relatively minimal and the impact considerable.

6. Whichever option is chosen, it is vital that an evaluation mechanism be employed. Ongoing evaluation of participant data and peer tutor growth is

important to the continued recognition of the integrative nature of the project and appropriate targeting of participant behaviors and changes of objectives.

CONCLUSION

"Integrated Educational/Leisure Time Model for Deaf Blind Children and Youth" is an exemplary demonstration project. Clearly, this project involves considerably more than the development of a peer tutor program which facilitates a swimming program. The transdisciplinary interaction of staff and the ability to monitor and facilitate development in multiple instructional arenas demonstrates that, indeed, this project is more than a traditional swimming program modified for the handicapped participants! Careful consideration should be given to replication potential.

The concept of using a recreation activity for the instruction of developmental skills is one that should be expanded within instructional intervention techniques. The project staff were committed to the relevance of the project and worked diligently in the identification of assessment tools and appropriate intervention techniques and the development of the related instructional modules. The resultant products are commendable. Although the skill acquisition data of the participants are not yet conclusive, it would seem that further analysis and development are necessary in order to maximize the utilization of the assessment tools and systems identified toward the end of the project. Options for replication and continued use of the project model should be carefully evaluated and disseminated to agencies providing services for the designated population.

On a personal note, as the project evaluator, I would like to commend the staff for their professionalism and collegiality. Rarely, if ever, have I seen a group of professionals working on a project who are more dedicated to the relevance of a program and, at the same time, maintaining professional respect

and collegiality without any sense of territoriality. It was indeed a pleasure for me to serve as the external evaluator. During each site visit, I found the staff to be candid and concerned as well as open to suggestions for modification and/or revision of programs and project implementation. All should be proud of their professional efforts in the implementation of this exemplary demonstration model project.